Preservation of the Woods and Forests.

THE questions, how long, at the present rate of waste and consumption, will it be before the woods and forests of the United States will have disappeared, and what will be the consequences, seem to us well worthy of attention at the present time.

Ten years ago, good "hard wood"—Beech, Maple, Hickory, &c.—sold in the market here for $2.50 to $3 per cord. At the present time, it commands $5 to $6; and that, too, while a very large portion of the population is using coal instead of wood for fuel. The stoves now offered for sale throughout the city, are nearly all constructed for coal burning; and were it not for the general prejudice against coal as fuel, among those who have never used it, the use of wood would be totally abandoned. In a very few years it will be so. The wood-market in Rochester was formerly a great feature in its street commerce; now it is scarcely noticeable. Under these circumstances, the high price wood commands shows most conclusively how scarce it has become.

So it is with timber for the arts. In ten years the price has advanced at least one-half; and many kinds—such as Oak, Walnut, Whitewood, &c.—formerly, and but a short time ago, abundant, are now obtained with difficulty and in limited quantities. Pine lands in the southern part of the State of New York, that less than ten years ago were utterly valueless, are now held about as high as the finest wheat-soil of the Genesee valley. And while this increased value of timber has taken place, railroads have penetrated the country in all directions, and opened the way to vast lumber regions that were before inaccessible. The most remote and secluded forests in the State have been invaded by the railroad and the steam sawmill; and yet prices are advancing rapidly. This affords unmistakable evidence that it can not be long before our woods and forests will have totally disappeared.

Not very long ago, farmers were careful of their *wood lot*—indeed, it was regarded as the most precious portion of their farm; now, as a general thing, its value consists chiefly in the dollars and cents it will command in market. The high price of wood for fuel, the increasing value of farming land, and the facility for obtaining coal by means of railroads, are inducing farmers to prosecute the work of clearing vigorously; and so the country is laid bare at a rate that persons who have not taken some note of these matters can scarcely credit. And if this has been so in the past, what will it be in the future, with a greatly increased population—doubling every twenty or twenty-five years?

It is the right and the duty of every man to manage his affairs in such a manner as may to him appear the most advantageous; and he who has had Pine lands in his possession for perhaps half a century, without realizing a dollar from them, is but too glad that at last they are available; and so he loses no time in converting them into money

as fast as circumstances may require or justify. So it is with the man who has valuable farming land covered with wood that commands a high price for fuel; with farm crops at the present high prices, he regards it true economy to clear his land as quickly as possible,—and so it may be, looking only at the present. We are not finding fault with this; we should probably do the same thing, if we were placed in similar circumstances; but what are to be the results? This is the point to which we desire to call attention. In this fast age of ours, we are all too apt to become so absorbed with present engagements as to forget the future, and changes are effected with such rapidity that the most thrifty and sagacious are behind in their calculations. Our progress outruns the most sanguine expectations; and so every day, unexpected results overtake us. Beside, we are all for money-making; we value everything by the dollar. So many acres of woodland will make so many cords of wood, and by deducting the cost of chopping and carrying to market, we have its exact value. So many acres of Oak, or Pine, or Hemlock forest, will make so many thousand feet of timber that will yield so much per thousand; and there's the value of that, and the *only* value. This is the way in which the importance of our woods and forests is estimated. Few they are, indeed, who stop to inquire, or to reflect for a moment, how the next or succeeding generations will procure a supply of timber,—how the face of the country will be shorn of its beauty, or the climate affected by clearing off the forests. The new States offer such inducements to emigrants, that very few persons calculate upon their children or children's children succeeding them in the occupation of their premises; the population—a great portion of it, at least—is always on the move; and so there is no strong inducement to look far ahead, in the way of improvements. Then, among the larger portion of the agricultural population, there has not yet grown up much sensibility to the beauties of nature—the poetic element has scarcely taken root at all. The circumstances of new countries—stern necessities and arduous labors—subdue the more delicate attributes of the mind; hence we seldom hear a regret uttered at the wreck of our beautiful rural landscapes. The noblest Oaks, that the contemplative mind would associate with majesty and strength, and with a long chain of events that have transpired during the period of their existence, are worth just so much per foot for ship-timber, and are remorselessly cut down; and so our finely-wooded hills and groups of forest trees, that now mingle with cultivated fields and green meadows, forming a charming landscape, will soon disappear, and the face of the country will become as bare and bald as an Illinois prairie. Would this not be a sad thing?

We have no doubt there are men who will call us foolish for offering such an argument against the clearing process, but we trust there are not many such. Few men can be so destitute of feeling and of common patriotism, as not to prefer that his country should be beautiful as well as prosperous. Men who reside in cities, take a pride in beautifying them, and vie with each other in erecting tasteful buildings, and making other improvements calculated to excite atttention and admiration. Their interest, as well as patriotism, dictates such a course; and why not so in the country? Why can not neighborhoods of farmers coöperate in plans of improvement,—in preserving portions of their woodlands,—in making good roads,—in planting avenues of trees,—and in such other works as are calculated to augment their own comforts, and beautify the neighborhood. Men engaged in such works as these, would experience a degree of satisfaction that the most successful money-seekers never know. Beside, such

improvements as these never fail to yield a profitable return in the increased value of land. We could point out farms in many parts of the country that have actually been doubled in their market value by tasteful and judicious though inconsiderable expenditure. Men seeking a habitation in the country, whether to engage in profitable agriculture or to enjoy retirement, turn their backs upon treeless districts. Indeed, without an affluence of trees and woods, no landscape can please or attract people to it. DOWNING says, in his *Landscape Gardening:*

"Among all the materials at our disposal for the embellishment of country residences, none are at once so highly ornamental, so indispensable, and so easily managed, as *trees* or *wood*. We introduce them in every part of the landscape,—in the foreground as well as in the distance, on the tops of the hills and in the depths of the valleys. They are, indeed, like the drapery which covers a somewhat ungainly figure, and while it conceals its defects, communicates to it new interest and expression.

"A tree, undoubtedly, is one of the most beautiful objects in nature. Airy and delicate in its youth, luxuriant and majestic in its prime, venerable and picturesque in its old age, it constitutes in its various forms, sizes and developments, the greatest charm and beauty of the earth in all countries. The most varied outline of surface, the finest combination of picturesque materials, the stateliest country house would be comparatively tame and spiritless, without the inimitable accompaniment of foliage. Let those who have passed their whole lives in a richly wooded country,—whose daily visions are deep, leafy glens, forest clad hills, and plains luxuriantly shaded,—transport themselves for a moment to the desert, where but a few stunted bushes raise their heads above the earth, or those wild steppes where the eye wanders in vain for some "leafy garniture,"—where the sun strikes down with parching heat, or the wind sweeps over with unbroken fury, and they may, perhaps, estimate by contrast, their beauty and value."

Will our country friends read this carefully, and learn from it to appreciate their woodlands, and hereafter think not of laying the axe to their roots, but rather how they may best preserve and improve them. If they fail to do this, most likely they will live to regret it; and if they do not, their successors surely will.

But there are other arguments in favor of preserving our trees and woods, beside that of butifying the landscape; if there were not, we should have less hope for them than we have.

No man who has ever lived in the country, need be told what an influence is exercised upon the climate by scattered groups of forest trees. Any one who has traveled across an open prairie in cold, blustering, winter weather, and then through a well-wooded region, can not have failed to discover the difference. The most disagreeable feature, both to man and beast, in our northern climate, is cold, cutting winds; and where their fury is unbroken, as in treeless or prairie regions, no living thing can resist them. The most hardy of our domestic animals will seek shelter, if within their reach, and, like drowning men, who seize the most frail support, they may often be seen clustering around a solitary tree, a fence corner, or wherever they can discover even the appearance of shelter. Men might learn from this, if not from their own feelings, how grateful is the shade and shelter of trees, and how important it is to preserve and cultivate them.

Is it not well known that the climate of all those portions of the country once well wooded but now in a great measure cleared, is greatly changed for the worse. In Central New York, Peaches were grown successfully for the first twenty years or so

after the settlement of the country; now they fail entirely. We have less snow, more severe cold winds, and winter wheat and other such crops are much more uncertain than formerly. Our summers, also, are marked by extremes of heat and drouth to a far greater extent. Very much of this change is unquestionably owing to the absence of the extensive forests that formerly covered a large portion of the country; and we shall feel it yet worse than now, unless the existing remnants of them be carefully managed.

Not long ago, we saw it stated in a French journal, that the population of certain districts had made application to the government, to aid in establishing plantations of trees, as the cutting down of the forests had so affected their climate as to render cultivation difficult and unprofitable. EMERSON, in his *Trees of Massachusetts*, brings forward several facts bearing on this point. He says:

"Another use of forests is to serve as conductors of electricity between the clouds and its great reservoir, the earth; thus giving activity to the vital powers of plants, and leading the clouds to discharge their contents upon the earth. A few tall trees on the summit of a hill are sufficient to produce this effect. A charged thunder cloud, which passes unbroken over a bare hill, will pour down its moisture, if its electricity is drawn off by these natural conductors. The dry sterility of some parts of Spain, anciently very fertile, is probably owing, in a great degree, to the improvident destruction of the forests, and the absurd laws which discourage their renewal. The forests also coat the earth and keep it warm in winter, shutting in the central heat which would otherwise more rapidly radiate into space and be lost. If you go into the woods at the end of a severe winter, you may any where easily drive down a stake without impediment from the frost; while in the open field by their edge, you find a foot or more of earth frozen solid. Forests act not less favorably as a protection against the excessive heat of the summer's sun, which rapidly evaporates the moisture and parches up the surface. The first Mahogany cutters in Honduras found the cold under the immense forests so great, that they were obliged, though within 16° of the equator, to kindle fires to keep themselves warm.* The rain, falling on the woods of a hill-side, is retained by the deep and spongy mass formed by the roots and the accumulated deposit of leaves, instead of rushing down, as it otherwise would, in torrents, carrying with it great quantities of loose soil. Protected also from rapid evaporation, it remains laid up as in a reservoir, trickling gradually out and forming perennial streams, watering and fertilizing the low country through the longest summers, and moderating the violence of drouths by mists and dews. All along the coast of New England, numerous little streams, which were formerly fed by the forests, and often rolled a volume of water sufficient to turn a mill in summer, are now dried up at that season, and only furnish a drain for the melting snows of spring, or the occasional great rains of autumn.

"Forests thus equalize the temperature and soften the climate, protecting from the extremes of cold and heat, dryness and humidity. There is little doubt that, if the ancient forests of Spain could be restored to its hills, its ancient fertility would return. Now there is nothing to conduct electricity, nothing to arrest the clouds and make them pour their treasures upon the earth, no reservoirs to lay up the winter's rain in store against the drouths of summer.

"Forests protect a country from the violence of winds. The lively author of '*Life in Mexico*' writes,† 'M. DE HUMBOLDT, who examined the will of CORTES, informs us that the

* "'At Guiana, in South America, within five degrees of the line, the inhabitants living amid immense forests, a century ago, were obliged to alleviate the severity of the cold by evening fires. Even the duration of the rainy season has been shortened by the clearing of the country, and the warmth is so increased, that a fire now would be deemed an annoyance.'— *Ure's Dictionary of Chemistry*, — article, Climate."

† Volume II., p. 52.

conqueror had left sugar plantations near Cuyoacan, in the valley of Mexico, where now, owing, it is supposed, to the cutting down of the trees, the cold is too great for sugar cane or any other tropical production to thrive.' And a most intelligent gentleman in Worcester tells me, that he attributes the greater difficulty now experienced in the cultivation of the more delicate fruits in that town, to the fact that the encircling hills, formerly crowned with trees, are now, to a considerable degree, laid bare. The laws of the motion of the atmosphere are similar to those of water. A bare hill gives no protection. The wind pours over it as water pours over a dam. But if the hill be capped with trees, the windy cascade will be broken as into spray. Its violence will be sensibly diminished. We are not aware, on the now protected and irregular surface of New England, how important are the screens furnished by the forests. Travelers from Illinois tell us, that on the vast prairies in that and some of the other Western States, the wind is almost always fresh, and often blows a gale, before which men can hardly stand. The new settlers are glad to shelter their habitations under the lea of the spurs of forest which stretch like promontories into the prairie lands. A forest near the coast in any part of New England, protects those further inland from the chilling east winds; and, while such winds prevail, a person passing towards the sea, experiences a marked change of temperature upon crossing the last wood, and especially the last wood-covered hill. One who would have his house screened from the northerly winds, must take care to have behind it a hill crowned with trees, or at least to have a wood stretching from the north-west to the north-east. A garden surrounded by tall trees admits the cultivation, even in our severe climate, of plants almost tropical.

"Forests not only protect from winds, they must prevent their formation. The air resting over a broken surface cannot be rapidly heated to a uniformly high temperature, so as to rise upwards in great masses and create a violent wind."*

Now, if forests or plantations of trees exercise such modifying influences upon climate, should not every man who cultivates the soil, take a lively interest in preserving them, and even in creating them where none or a too scanty supply exists at present? Next to the soil itself, the climate is the most important consideration to agriculture and horticulture. It is the subject of continual apprehension and remark. The dread of intense cold, excessive heat or dryness, high winds, &c., haunt the anxious cultivator from one end of the year to the other; and in the most favorable seasons, he can not hope to escape without loss. Look back to the winter of 1853 and '54, and to last summer. Who could estimate the total loss from extremes of cold and drouth in that single season? We trust that in these days of improvement, when everything pertaining to the rural arts is undergoing an intelligent scrutiny, that the climatic influence of trees will not be overlooked. We have little hope of reaching directly, with one word of warning, a very large number of those who wield the destinies of the

* "A writer in the 6th volume of the *N. E. Farmer*, says, 'It is not merely in forests, nor as supplying firewood and timber that trees are valuable. 'Considered agriculturally,' says an English writer, 'the advantages to be derived from subdividing extensive tracts of country by plantations are evidently great, whether considered in the light of affording immediate shelter to the lands, or in that of improving the local climate.' The fact that the climate may be thus improved, has, in very many instances, been sufficiently established. It is indeed astonishing how much better cattle thrive in fields even but moderately sheltered, than they do in an open, exposed country. In the breeding of cattle, a sheltered farm, or a sheltered corner in a farm, is a thing much prized; and in instances where fields are taken by the season for the purpose of fattening cattle, those most sheltered, never fail to bring the highest rents. * * * Dr. DEANE has observed, 'pasture lands should be well fenced in small lots, * * * and these lots should be bordered at least, with rows of trees. It is best that trees of some kind or other should be growing scattered in every point of a pasture, so that cattle may never have far to go in a hot hour, to obtain a comfortable shade.'"

"'Small lots, thus sheltered, are not left bare of snow so early in the spring as larger ones lying bare; since fences and trees cause more of it to remain on the ground. The cold winds in March and April hurt the grass much when the ground is bare; and the winds in winter will not suffer snow to lie deep in land that is too open to the rake of winds and storms.'—*N. E. Farmer*, VI., 350."

woods, but we hope the readers of the *Horticulturist* will become missionaries in this cause, and do whatever lies in their power to stay the axe.

Hereafter we shall have something to say on the rearing of plantations in thinly-wooded, or prairie regions.

THE TYSON AND OTHER SUMMER PEARS.

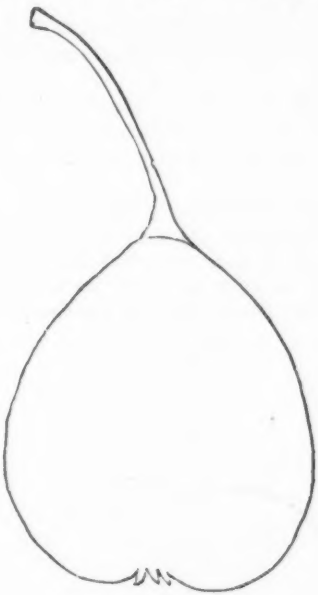
In looking over the list of Summer Pears now in cultivation in this country, we find the native sorts occupying a prominent position. Confining our present view to those pretty well known and ranking as best, we have the *Tyson*, *Brandywine*, *Ott*, and *Moyamensing*, of Pennsylvania; the *Dearborn's Seedling* and *Andrews*, of Massachusetts; and the *Bloodgood* and *Osband's Summer*, of New York. Here are eight varieties all ripening in the climate of New York between the first of August and middle of September, beginning with the *Bloodgood*, and ending with the *Andrews*. We are yet in want of very early American Pears competing with the *Madeleine* and *Doyenné d'Eté*, and we would suggest to those whose attention is directed to the production of seedling varieties, to make special efforts to obtain such. An early native Pear as good as the *Doyenné d'Eté*, and twice as large, would be a great gain. This may soon be produced; in view of our present success, it is by no means unreasonable to hope for it. A cross between the *Amire Joannet* and *Bartlett* might give us what we want, and at any rate is worthy of trial. We must not rely wholly upon chance seedlings.

Of the native summer varieties named above, the *Bloodgood*, *Tyson*, *Ott*, and *Brandywine*, are destined, we think, to be permanently valuable, whatever our future acquisitions may be. The *Dearborn's Seedling* may soon be placed among the rejected; for although it is a handsome and good Pear, a free grower and good bearer, yet its small size and want of high flavor, as compared with the *Tyson* or *Brandywine*, will lessen its value, and as people's tastes become critical, and the best more abundant, it will scarcely be considered worthy of general cultivation. At the late meeting of the Pomological Society, Samuel Walker, Esq., whose intelligence, good taste, and sound judgment in pomological matters, entitle his opinions to great weight, named the *Rostiezer*, *Tyson*, and *Brandywine*, as the three best Summer Pears; and we believe that most cultivators who have had experience enough to form a correct opinion, will not hesitate in assenting to this. Yet, if we were asked to recommend three Summer Pears to ripen in succession, we would not name these, because they are too nearly of one season; we should rather name the *Madeleine* or the *Doyenné d'Eté*, the *Tyson*, and the *Bartlett*.

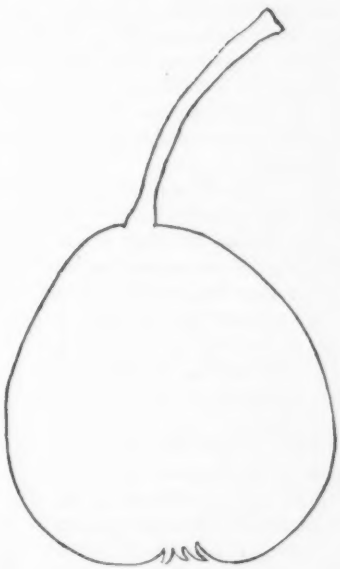
The *Tyson*,* which is more particularly the subject under notice now, is an accidental seedling, found in a hedge row on the farm of Mr. Jonathan Tyson, of Jenkintown, near Philadelphia, some sixty years ago, and we believe the original tree is yet living. It has not yet been extensively disseminated, or at least has not yet borne in many localities. The oldest trees we know of in Western New York, are on the grounds of Asa B. Smith, of Macedon. We saw these trees some eight or nine years ago, and they had then just commenced bearing full crops. It is rather a tardy bearer

* See Frontispiece.

on Pear stock; we have trees eight or nine years old that have not yet fruited, but we have had fine crops from young trees on the Quince stock. A small pyramidal tree, only four years old, was last season covered from top to bottom with fruit. The tree was healthy and vigorous, and the fruit of full size and highly colored, making altogether the most beautiful object of the kind we have seen. We think we have seen it stated that it comes into bearing the fourth or fifth year on Pear stock; but this must be a mistake, unless forced by summer pruning or some other operation calculated to subdue its naturally vigorous and rapid growth. The habit of the tree is erect and



TYSON.



WESTCOTT.

pyramidal. Young shoots—vigorous, dark brown, darker than the *Seckel*. Leaves—dark green, above medium size, finely serrated, and remarkably persistent. Fruit—medium size, two to two and a half inches long and one and a half to two inches wide, pyramidal, tapering regularly to the stalk. Skin—dull yellow, becoming clear at full maturity, with a dark red cheek. Stalk—nearly two inches long, rather slender, and inserted without depression. Calyx—large, open, in a shallow basin. Flesh—fine-grained, melting, sweet, and aromatic, like the *Seckel*. Ripens from the middle to the end of August; should be picked ten days to a fortnight before maturity. Last summer our best specimens were gathered on the 14th of August, and eaten on the 23d. It succeeds particularly well on the Quince, judging from trees of seven or eight years' growth. This variety appears to us to be a cross between the *Madeleine* and the *Seckel;* it has the form of the first, with the color and somewhat of the flavor of the latter, and the growth of the tree partakes of the characteristics of both. Possibly it

is a seedling from the *Rousselet de Rheims*, an old widely-disseminated variety, and said to be the parent of the *Seckel*. At all events it has secured the reputation of being one of the best if not the very best of American Summer Pears, and we can safely recommend it to a place in every collection, large or small.

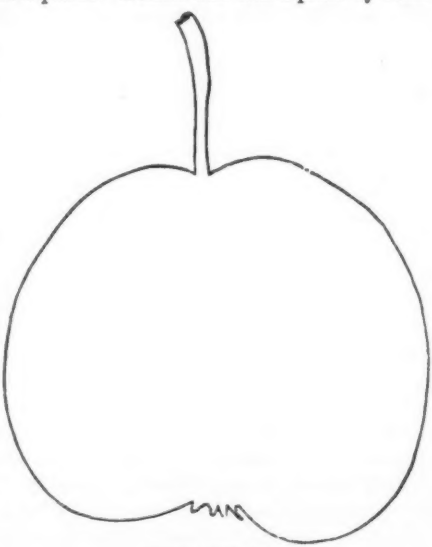
There are several new summer varieties of native origin that give promise of excellence, among which the *Sterling*, from Western New York, is prominent. We have not seen the fruit, but the tree is a vigorous and beautiful grower, and this is not a trifling recommendation. The *Westcott*, of Rhode Island, also promises well. It ripens in August, and in size and form resembles the *Madeleine*.

Among Summer Pears of foreign origin, the *Doyenné d'Eté*, *Beurré Giffard*, and *Rostiezer* are great acquisitions. Portraits and descriptions of these three will be found in the two last volumes of the *Horticulturist*.

The *Giffard* is decidedly the largest and finest Pear of its season, following close upon the earliest varieties, *Doyenné d'Eté* and *Madeleine*. The tree is not so robust a grower as we would desire, but this defect can very well be borne, in view of its excellence.

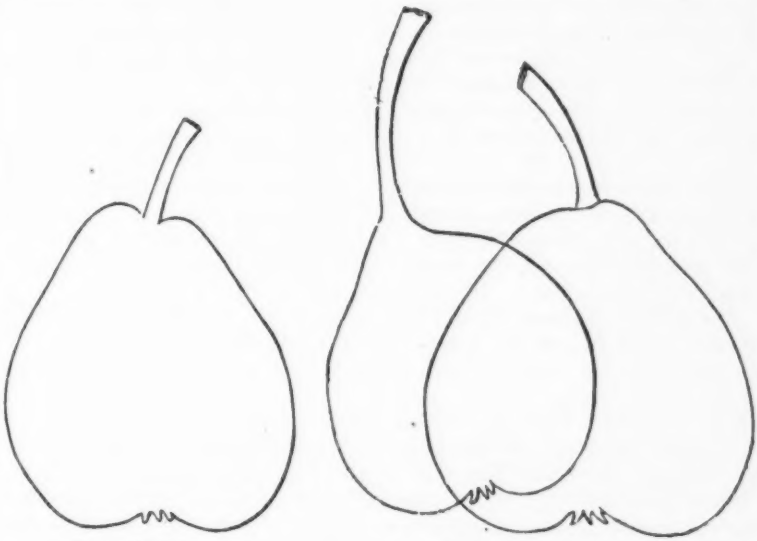
The *Rostiezer* is a rampant grower, like the old *Jargonelle*, making long, stout, naked, very dark shoots; quite at home on the Quince, and is not a tardy bearer on the Pear stock. The fruit is not large enough to suit some people, but for a nice dessert Pear, it is as large as we would desire. Very few persons would wish to eat an entire Pear that would weigh half a pound. Dealers who seek a profit by retailing, are not very partial to *large* Pears, as they buy by the measure and sell by count. As taste becomes cultivated, there will be less importance placed upon the size of such fruits as Pears and Apples.

The *Beurré Goubault* is of comparatively recent introduction. It is a remarkably vigorous grower, and an early and abundant bearer. Fruit—medium size to large, roundish. Skin—thick, green. Flesh—soft, juicy, melting, sweet, but not high flavored. Both tree and fruit so much resemble the *Summer Francreal* as to show a close relationship. Ripe about the first of September, almost the same season as the *Bartlett*, and this detracts from its value.



BEURRE GOUBAULT.

Manning's Elizabeth is a very beautiful and excellent variety, medium size, obovate. Skin—pale yellow or straw-color in the shade, streaked and mottled with bright red in the sun, and sprinkled with small red dots. Flesh—a little coarse, but melting, sweet, juicy, and highly perfumed. Ripe about the middle of



MANNING'S ELIZABETH. ROUSSELET STUTTGART.

August. This variety has been recommended by the Pomological Society. A good grower, and productive.

The *Rousselet Stuttgart* is an excellent Pear, but little known. The tree is hardy, an erect, beautiful grower, and a prodigious bearer, succeeding equally well both on Pear and Quince stocks. The wood is dark, like the *Seckel*, *Tyson*, and others of the *Rousselet* stamp. Fruit—medium size, obovate, often pyramidal, slightly necked, greenish-yellow in the shade, dull brownish-red in the sun, with carmine dots thickly sprinkled over it. Flesh—half-melting, juicy, sugary, and aromatic. Ripe latter end of August and first of September. Should be picked a week before ripe, but is often found in very good condition on the tree.

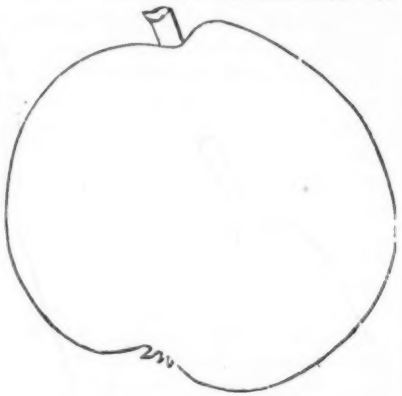
The old English *Jargonelle* is almost abandoned; for although it is a fine tree, a great bearer, and a sprightly, refreshing Pear, it is difficult in our climate to get it from the tree before it is gone at the core.

The *Julienne* has been underrated. It is a strong grower, very hardy and prolific, and if picked in proper season, a good fruit. At the west and south it succeeds remarkably well, and is very justly held in high esteem. It will not soon be struck from the lists of good, profitable Pears.

The *Summer Francreal* is not *best* in quality, but is so productive and so good as to be highly valuable. When taken from the tree at the proper time, it is as juicy as a Peach. A friend of ours regards it as the best substitute for a Peach of any Pear he knows; and he is pretty well informed.

The *Duchess of Berry* (*Duchesse de Berry d'Eté*) is a handsome and very good Pear, ripening in the latter end of August and first of September. It is distinct in

form, being generally roundish, with a short, stout stalk. Color—bright yellow. It frequently varies from this form, being somewhat pyramidal, with a longer and more slender stalk, and has occasionally a blush on the sunny side.



DUCHESSE DE BERRY D'ETE.

The *Summer Calebasse*, (*Calebasse d'Eté*), ripening also latter end of August, is likely to prove good. It is distinct in form, resembling the *Long Green*.

The *Jalousie Fontenay Vendée* ripens about the same time as the *Bartlett*, and is a very excellent Pear, a good grower, and remarkably productive, succeeding well both on Quince and Pear.

We might mention several other Summer Pears which are in American collections, but these are the most important.

The "*Revue Horticole*" for November last, gives a drawing and description of a new variety—*Briffant*—which resembles the *B. Giffard*, and ripens first of August. It has been originated by Mr. BRIFFANT, gardener at the Sevres porcelain manufactory.

The varieties we have mentioned, might be classified, for convenience, as follows:

BEST, AND WORTHY OF GENERAL CULTIVATION.—*Madelaine, Doyenné d'Eté, Bloodgood, Beurré Giffard, Rostiezer, Tyson, Ott, Brandywine, Manning's Elizabeth, Jalousie Fontenay Vendée*, and *Bartlett*.

VERY GOOD, VALUABLE FOR THEIR PRODUCTIVENESS, VIGOR, ETC.—*Dearborn's Seedling, Moyamensing, Julienne, Summer Francreal, Rousselet Stuttgart, Beurré Goubault, Andrews*.

NOT SUFFICIENTLY TESTED.—*Westcott, Duchess of Berry, Summer Calebasse*.

NOTES ON THE CULTURE OF THE FOREIGN GRAPE.

BY A. MESSER, GENEVA, N. Y.

At the end of the Grape season, I feel inclined, from habit, or a better reason, to make a few comments on the past, but not to put on airs of importance, for I have but a small vinery, and nothing to recommend my speculations to the public but a love for the study of *vegetable physiology*, and a habit of careful observation. It is well, also, for gardeners in different latitudes, and with different facilities for producing fruit, to "compare notes." Such opportunities have been useful to me, and I suppose to others also.

In my house are ten or eleven fruit-bearing vines, on which about one hundred clusters were allowed to mature. A part of these vines are six years old from the bud, and others only four years. The number of bunches was regulated by the age and strength of the vine. In 1853 some of them were over-cropped, and therefore care

was taken not to fall into the same error again. If, by reason of a deficient border, or unskillful management, or deficient sunlight, the vines have made but a slow growth the first two or three years, there is great danger of over-cropping.

With some, it has been a question whether it be expedient to use artificial heat, even in a slight degree. The grower of Grapes for the market will consult his pecuniary interest by pursuing one course or the other, or perhaps *both* by using two different vineries—one of them to be a forcing-house; but with the amateur, who studies the gratification of himself and family, the case may be different. We speak of a gentle forcing in April and May, by the cheapest mode, which is any old stove with a boiler, to produce constant evaporation, and thus supply moisture.

The advantages of this hastening of vegetation are as follows: You will gain some two or three weeks in *time*. Your *Muscadines*, or *Chasselas*, will be fit to cut early in August, when no others are ripe; the *Hamburghs* will be ready early in September; and the *White Muscats* about the middle of the same month. Being ripened in hot summer weather, they will be very sweet, having their peculiar aroma well developed; and this is a luxury which can not be enjoyed under other circumstances. I have seen this favorite variety, which, on the first of October, *was said to be ripe*, but the flavor was deficient, and the color green.

But again, there may be another contingent advantage of a little fire heat. It sometimes happens that in the latter part of May, when the vines are in bloom, there will occur two or three successive days of disagreeably cold and wet weather; the temperature will get too low, especially for the *Muscats*, and the impregnation will be imperfect. Whether it be owing to an immature state of the pollen, or to some other cause, is immaterial, the result will be Grapes badly set. At that critical time, let the temperature be raised from fifteen to twenty degrees, and all will go well.

If it be objected that *warming* is expensive, and we may as well leave it all to nature, we reply, What is the expenditure of two or three dollars for a cord of ordinary wood, in comparison with Grapes well set, and ten days acceleration of the fruit?

The roots, also, running into the outside border, may be stimulated by laying over them some old sash, which can often be bought for half the customary price.

We are here led to say a few words on the operation of heat and moisture, the two chief stimulants of vegetation.

The business of watering will be a light labor until June, as the soil is saturated in winter, and the evaporation proceeds slowly till the middle of June; but then, as the days are long, and the solar heat becomes powerful, there should be no lack of moisture. No doubt many vines throughout the country, during the past summer, suffered for the want of water. The result was, a limited growth; but when the fruit matured, it was found to be of an excellent quality. Very different was it the previous year (1853). Very fine showers fell in August, and did no injury; but heavy rains continued to fall at short intervals throughout September, and the outside border became completely saturated and prematurely cold. The result was, the Grape juice was too much diluted, and the flavor comparatively tame. The peculiar sugar of the Grape was developed and concentrated last year much beyond what is usual; so what we lack in quantity is compensated for in quality. We learn from these facts, that when we have too much rain, we must contrive some way to shed the water off. About the first day of July, when the clusters should be thinned out, the showering

should be diminished, and care be taken not to wet the Grapes. Their beauty will be greatly injured by destroying their bloom. I made such a mistake in 1853.

The use of sulphur to prevent mildew, is supposed to be well understood and appreciated. The danger will commonly be in the month of August. Near the last of the month we had, in this locality, two successive days of cloudy, damp, hot weather. The *Muscat Alexandria* were full grown, and beginning to change color on the sunny side. On the opposite side there was, on some few berries, a beginning of mildew. At once I separated them a little, and applied a little sulphur. From that day the plague ceased; and when the Grapes were ripe, and cut from the vine, the tarnished spots were of a rusty appearance, and not of large size, but the Grapes were good.

Such has been my treatment; and what of the results? They have been, in a great measure, satisfactory. It is indeed a delicate matter for me to speak; but I venture to say that some specimens of *Black Hamburgh*, *White Muscat*, and *Cannon Hall*, which were shown at our town Fair, were much admired for their rich color, full maturity, and perfect beauty. Some berries of the *Cannon Hall* measured three inches in circumference.

Care should be taken, that water for the border be of a proper temperature when applied. A friend sent me a load of water from the lake, in the midst of the drouth, and after stowing the greater part, some buckets were thrown upon the outside border. The next morning I observed a few of the *Muscats*, then full grown, were discolored, and beginning to shrivel. At first I was surprised; but a little reflection indicated the cause. The check had been too great; for, howsoever grateful a tepid bath may be, the *cold bath* is a part and form of hydropathic treatment which they repudiate.

I have just read the November number of the *Horticulturist*, and am highly delighted with the account furnished by "Amateur." I hope to give, this year, some statements of progress in Mr. King's grapery, built on the same model.

I conclude by saying, that I fully ripened some *Catawbas* last season, by protecting them in the spring, and then, on the first of June, tying them up to a trellis in the open air. Early in October they were again laid down under glass; and on the 25th of the same month they were fully mature,—so said my neighbor, who last year was treated to the same variety in Mr. Buchanan's vineyard at Cincinnati. At a convenient time I should like to say a few words more about protecting the *Catawba*.

NEW FRUITS.

[In Rivers' "*Supplement to Catalogue of Fruits*," published last November, we find the following commentary on fruits which he has recently tested. Such information is looked for by those who are in search of novelties. We are surprised that the *Beurré Clairgeau*, the finest of all new Pears, has proved rather inferior for two years. We believe it has so far been invariably first rate in this country. It seems that our American Peaches are proving fine in Mr. River's "orchard-houses."—Ed.]

APRICOTS.

There are no very new varieties of this fruit; but as two or three lately introduced have shown their characters this summer in a more marked manner than heretofore, they deserve a more particular description than that given in the catalogue.

St. Ambroise.—This is evidently a seedling from the *Large Early*, and is one of the best large early Apricots known. In size it approaches very nearly to the *Moor Park;* is very much compressed or flattened; its flesh is juicy, rich, and sugary, much superior to the *Large Early;* and it ripens fully a fortnight before the *Moor Park*. The tree is remarkably vigorous and healthy, and it is a profuse bearer.

Kaisha.—This is also an early Apricot, not so large or so early as the preceding, but follows closely upon it. Its flesh is high-colored, very juicy, rich, and agreeable. It succeeds admirably as a pot-tree for the orchard-house, and bears abundantly.

Beaugé.—This is a new variety of the *Moor Park* race, and has the valuable quality of ripening ten or twelve days after it. Its fruit is large, juicy, and rich; and the tree is very hardy and productive.

Tardive d'Orléans.—This is still later than it at first appeared to be, and this season ripened in the orchard-house more than a fortnight after the *Moor Park*, hanging on the tree till the middle of September, shriveling and becoming very rich.

Peach, or *Pêche* of the French, or *Gros Pêche.*—Although the *Moor Park* has for many years been reckoned the standard of excellence in England, this is a larger and better fruit; in fact, it is the best of all Apricots, and is often confounded with the *Moor Park*. Its leaves are larger and more round; its buds are more prominent than those of that variety; and one great difference exists—it will not grow when budded on the same Plum stock as that used for the *Moor Park*. Its habit is most robust, and it bears profusely either as a wall-tree, or in pots in the orchard-house.

Alberge de Montgamet is a small but useful and agreeable early Apricot either for the wall or orchard-house.

CHERRIES.

The *Belle Agathe* Cherry, figured and described in the *Album de Pomologie* as a full-sized, sweet, and good variety, hanging on the tree till the end of October, proves to be no better or larger than *Tardive de Mons*—a small, hard, late Cherry. For trees of this "*Belle Agathe*" I paid a Belgian nurseryman one guinea each. Some American Cherries, raised by Dr. KIRTLAND, of Ohio, have proved of great excellence. Of these, *Governor Wood*, *Rockport Bigarreau*, *Cleveland Bigarreau*, and *Ohio Beauty*, are the best.

CURRANTS.

La Versaillaise, *La Hative*, and *La Fertile*, three varieties comparatively new, are well worthy of cultivation. The first is the largest Currant known—larger, even, than the *Cherry* Currant: its bunches are very long. The second and third are well named, for *La Hative* is as early as *Knight's Early Red*, but with berries much larger, and *La Fertile* is a most prodigious bearer, so that its leaves are hidden by its fruit.

Transparent White proves a most excellent sort. Its fruit is more amber-colored than any other White Currant.

PEACHES.

The orchard-house has the past season been of great assistance in developing the qualities of Peaches which might otherwise have remained unknown for some years. The *Bourdine* is one under this category, for it has been confounded with the *Late*

Admirable, whereas it is much larger, ripens a week or ten days after it, and is a most excellent late Peach for the orchard-house.

The American Peaches, hitherto thought lightly of in this country on account of our climate being too humid for them when cultivated on walls in the open air, are of the highest excellence in the orchard-house. *Scott's Early Red*, ripening about the middle of August, and *George IV*, ripening the second week in September, were this season juicy, vinous, and rich beyond any other varieties. The *Early York* was also very good, and the *Large Early York* equal to *George IV*. These Peaches are more piquant and racy in their flavor than the European varieties.

A new late *Grosse Mignonne* Peach (*Mignonne grosse tardive*), gained by Monsieur Lepere, of Montreuil, from a sporting branch of the *Grosse Mignonne*, is a most excellent variety. It ripens a fortnight later than its parent, and is equally good.

Monstreuse de Doué, a seedling raised from *Reine des Vergers*, is a new French variety, like its parent in excellence of flavor, but very large, and more deep in color than most Peaches. Its skin is entirely of a deep crimson.

The *Angers Large Purple* is one of the largest and finest of Peaches, and ripens about the same time as the *Chancellor*, or rather just after, forming a capital successional Peach.

Gregory's Peach, raised from seed in Gloucestershire, is a very hardy late Peach, melting and very good. It closely succeeds the *Late Admirable*, and is a most abundant bearer.

PEARS.

There are more new Pears than can ever be brought into general cultivation. Among them some will probably prove more hardy and yet equally as good as our well-known varieties; and in such instances they will be valuable.

Beurré Clairgeau.—This large and very handsome Pear was not of first rate quality last year, which was imputed to the cool, moist season; but this season it has also proved of inferior quality—its flesh tender and juicy, with a slight perfume, but flat and watery, and very inferior to that standard of perfection in autumn Pears, the *Marie Louise*.

Bergamotte Dussart.—This, a medium-sized Pear, ripening in December and January, is a most delicious melting Pear, with a peculiar aroma. It is hardy, and ripens well as a pyramid, but does not appear to grow very freely on the Quince stock.

Prevost.—This very handsome and prolific variety requires a warm soil and situation as a pyramid. It is not melting, but becomes soft late in spring, and has a highly perfumed flavor. My specimens of 1853 kept till last June, but they did not ripen so well as usual.

Prince Albert (Van Mons).—This is a variety likely to be very valuable. It is in shape like *Beurré Rance*, and usually keeps longer, often till April and May, which that variety rarely does. Its flesh is half-melting, juicy, and rich. The tree is very hardy, and grows well on the Quince stock, and will form a handsome, prolific pyramid. It may be planted against walls with south-east, east, or west aspects, with advantage.

Surpasse Crassane (Van Mons).—This is the *Crassane* in quality and shape, which is enough. No finer Pear has ever yet been raised than that old favorite variety, large trees of which may often be found in the gardens of our old country mansions, bearing

Pears few and far between. The habit of this seedling *Crassane* is very vigorous and healthy. It grows well on the Quince stock, and seems inclined to bear well as a pyramid or bush, and also well deserves a south-east or east wall.

PLUMS

Belle de Septembre.—This proves to be a useful variety. It is large, oval, of a bright red color. In England it does not ripen till the middle of October, and is a very hardy, excellent kitchen fruit.

Cloth of Gold (Esperen) proved this season of excellent quality from a southeast wall. Shape—roundish-oval. Color—bright golden-yellow. Size—as large as the *Washington*, or larger, and very juicy and rich. It ripened just before *Coe's Golden Drop.*

Diamond.—This large and magnificent Plum can not be too highly recommended for preserving or kitchen use; its agreeable acid is never killed; and it is quite equal if not superior to the *Winesour* of Yorkshire, and, like that well-known variety, it is a most disagreeable Plum to eat.

Frost Gage.—This should be called the *American Damson*, as it is a *Damson* in every respect, and the best of all. Its fruit is round, or very slightly inclined to oval; of a deep purple; will hang on the tree even to the end of October, and is always brisk in its flavor, juicy, and agreeable. It bears most profusely either as a standard or pyramid.

Prince Englebert.—This is a Plum from Belgium, of the same race as the *Diamond.* It is of the same deep purple color, but in a tart it is more sugary. It forms a handsome pyramid, and bears abundantly. It ripens about a week before the *Diamond.*

RASPBERRIES.

The *Black* Raspberry proves to be a most distinct and useful variety, its brisk acid serves so well to correct the cloying sweetness of jam made of the common sorts.

The *Belle de Fontenay* is a dwarf-growing variety, with large and deep green leaves. Bears large fruit all the autumn, of good flavor, but requires a warm soil and exposure.

The *Merveille de Quartre Saisons* is, of all the autumnal Raspberries, the most abundant bearer; its spikes of fruit are often two feet long, and produced till the end of October.

The *Merveille de Quartre Saisons* with yellow fruit is a new variety raised from the above. It bears abundantly in the autumn, and its fruit is sweet and well flavored.

STRAWBERRIES.

New varieties of this favorite fruit are by far too numerous, both on the Continent and in England. With many of them, their name is the only distinguishing characteristic. The following are French and Belgian Strawberries:

1. Belle de Palnau.
2. Comtesse de Marne.
3. Comtesse Zamoisky.
4. Comte de Flandre.
5. Cremont.
6. Duchesse de Trevise.
7. Duc de Brabant.
8. Ferdinand.
9. Honneur de la Belgique.
10. La Reine.
11. Leopold.
12. Louise Marie (Lorio).
13. Lorio.
14. Marquise de Latour Maubourg
15. Merveille.
16. Merveille de Flandre.
17. Reine des Belges.
18. Triomphe de Gand.
19. Triomphe de Liege.
20. Vicomtesse Hericart de Thury.

Of these, although their names are so expressive, scarcely any are remarkable for their qualities. They are all red and handsome, except No. 16, which is a large, white Strawberry, apparently the same as the *Bicton Pine;* a variety of that very old sort the *White Carolina.*

No 5 has been called a perpetual Strawberry. It is not so; but it forces well.

No. 4 appears to be hybridised with the *Alpine* Strawberry, and bears a very late crop. The fruit is too acid. This cross will probably give us, one day, some good late varieties, as one is now advertised from Liege, under the name of *Delices d'Automne;* and another from Bordeaux, *La Belle Bordelaise*, "très grosse, goût exquis." These sorts will probably be found too acid for our taste, but they will undoubtedly be the parents of some autumnal varieties, more sweet and rich, and thus prolong the season of this charming fruit.

The American Strawberries do not seem to be adapted to our climate. The best of them, and, according to American pomologists, the best variety they have, *Hovey's Seedling*, grows most vigorously, but is a shy bearer. Its fruit last season was better than usual, of a bright red color, medium size, and of a brisk agreeable flavor, but not at all rich.

Myatt's seedlings seem to be of a peculiar breed, and, with the exception of *Surprise*, which, like *Prince Arthur*, is very large, with no other redeeming quality, have more or less the *British Queen* aroma. Three of his seedlings, given to a friend to prove, about three years ago, are perhaps as fine as any of our new Strawberries, or finer. They were numbered by the gentleman they were sent to, Nos. 1, 2, and 3. No. 3 is as large as the *British Queen*, of a uniform bright crimson to its extreme point, and rich and most excellent in flavor. They are all remarkably hardy and great bearers.

Nimrod has proved here so like *Eleanor* as not to be distinguished from it, either in size, flavor, or the habit of the plants.

The new Strawberries from Yorkshire—*Ajax*, *Captain Cook*, *Fillbasket*, and *Ruby*—are hardy, productive varieties, and give large and handsome fruit; but, in common with nearly all the new sorts, they lack that flavor which now ought to be reckoned essential in every new kind of Strawberry; I mean either the delicious aroma of the *British Queen* or the piquancy of the *Old Pine.*

HOW TO CUT WILLOWS.

BY JOHN SAUL, WASHINGTON, D. C.

If the reader will turn to page 172 of the last year's volume, he will find an admirable article on "Willow-Culture," by Mr. Chas. Downing, of Newburgh, N. Y., in which the subject is so plainly discussed that the merest tyro in Willow-growing can not fail, if its directions are carried out. I question much if a better treatise on the subject ever appeared, though many have been more elaborate. Every Willow-grower, however experienced, should read it, and may read it a second time to advantage. On the nature and preparation of the soil, culture, &c., nothing can be added. Follow Mr. D.'s instructions, and success is certain. I will, however, offer a few remarks on the distances at which Willows should be planted, and how cut in after years, though the former is a consequence of the latter.

Willow sets, as commonly planted, would have the appearance of fig. 1. It will be perceived that one eye is above the ground, and more frequently there are two. At the end of the first summer's growth, it has the appearance of fig. 2. These, we will suppose, are cut back, as shown at fig. 3.* It will be seen that a "snag" is left on the

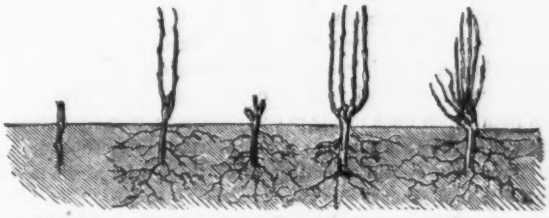


Fig. 1. Fig. 2. Fig. 3. Fig. 4. Fig. 5.

old stem, which will increase at all subsequent cuttings, leaving a short stem of it, perhaps a few inches, between them and the surface of the ground. At the end of the second year, we have a plant like fig. 4; and at the end of the third year, like fig. 5. At this and subsequent ages, many of the "stools" will be getting one-sided, from the breaking off of "snags" by carelessness or accident; and when the stools stand close together, many shoots will be weak and worthless. This is a very bad system of cutting, yet in England it is the general one. A much better system is practiced by a few

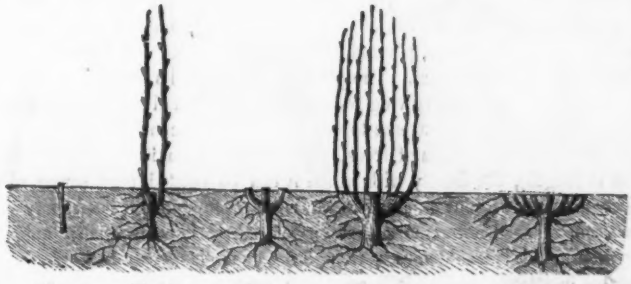


Fig. 6. Fig. 7. Fig. 8. Fig. 9. Fig. 10.

good growers. When the cutting is planted, it has the appearance of fig. 6—the top bud level with the surface of the ground. It will be found that the shoots given the first summer, as shown at fig. 7, will be much stronger than that shown at fig. 2. The reason is obvious: as soon as the shoots fairly commence growing, roots are emitted at the base of the pushing buds, which, being near the surface, greatly assist their growth, When these are cut back, it must be done close to the surface of the ground, as seen at fig. 8. The next summer the stools will give a luxuriant growth of "rods," as at fig. 9, showing a great contrast to stools of the same age, as at fig. 4. Persons unacquainted with Willow-growing must not think this overdrawn, as I can answer for it;

* It is much better not to head them back until the end of the second year, as it materially strengthens the stools. Many good growers occasionally let their old plantations stand two years, to give them greater vigor.

the contrast in the Willow beds will be still greater than on paper. Little explanation is necessary on this point. The rods given by a stool like fig. 4 have to draw all their nourishment through the stem, and will, as a consequence, be weak in contrast with those given by a stool like fig. 9. Where the whole stool, to the very top, is in the ground, roots are emitted from every point, and the stools swell accordingly; and when growth commences in spring, shoots will be thrown up all around the stool, from the under side of the headed down branches. These shoots springing out of the soil, as soon as fairly growing, also emit roots in every direction, from the point of junction with the previous year's wood. It will be clearly seen, under circumstances such as these—a stool from which roots ramify in every direction, with the young rods rooting into the soil as well—the rods must, as a consequence, be of superior growth to the other system. From the system of cutting back, the stool spreads to a considerable distance; three feet in diameter will soon be common in a good soil and under good culture. I have seen them much wider. The rods having more distance, and deriving the same nourishment from the parent stool, are not only long. but uniform in size. If cut on the other system, many weak shoots will be given, for want of room, air, nourishment, &c. This system of cutting close to the ground must be adhered to at all subsequent cuttings. It will be plainly seen, that under this mode the stools must be planted at a considerable distance apart,—on no account should they be closer than three feet each way; three and a half feet will be a still better distance; and on favorable soils, with the very strongest Willows, four feet each way will not be too much.

I am happy to be able to endorse all that Mr. Downing says of the Willow imported by Dr. Grant. It is now twelve years since I became acquainted with that variety and so superior to all other varieties of Osier was it found, that ten years since, a Willow plantation under my charge, planted with inferior varieties, I had cleared, prepared, and planted exclusively with that. The principal points of its excellence consist in its very vigorous growth, annually giving rods of great length and uniform thickness; but the great quality of all, is its extreme toughness. Nurserymen in Europe use Willows largely for sewing their bundles of trees. This variety, from its length, slightness (in proportion to length), the facility with which it can be twisted, bent, sewed, or drawn, like a piece of twine, without cracking in the least, recommends it before any variety I have ever seen. I need not remark that basket-makers like this quality quite as well as nurserymen. This is an old variety, though not generally grown in England. In one or two places in Gloucestershire it is admirably grown, to the exclusion of all others. I can not help regretting that this variety should have been given a new name on its introduction here. It has no particular name where grown, but I conceive it would be better to designate it the *Gloucestershire* Willow, or the *Tockington*, from the village near which it is extensively grown. New names have had their bad effects on fruits introduced into this country, and it will lead to as much confusion if applied to Willows.

[We are greatly obliged to Mr. Saul for his excellent hints on the treatment of Willows. People who suppose that any sort of cutting will do "well enough," will find themselves as much mistaken as those who consider any sort of pruning good enough for fruit trees. Willow-culture is said to offer ample remuneration in a suitable soil, and not a few are at this time engaging in it. The cutting is a point of much importance, and we trust what is here said concerning it, will command attention.—Ed.]

COLOR IN NATURE AND ART.*

In point of richness and gorgeousness of color, flowers are unrivalled. If we may be allowed the simile, the ethereal phenomenon of color in them gains as much by a union with earthly substance, as the spiritual nature of man is rendered more rich and beautiful by the action of the sensuous emotions. But if we would see color in its native purity and brilliance, even flowers must be put aside as too gross and earthy in their structure. We must turn to gems, and fire, and light itself. Throw a few grains of chemical stuff into a bright-burning fire, and see how the flame shoots aloft in a wavy pyramid of purest emerald,—or change the substance, and lo! undulating spires of loveliest ruby or amethyst,—burning with so celestial a brilliance and transparency as if freed from every tinge of earthy matter, and re-shining with the splendor of its native skies. Or take the living light itself, and refract it through prisms of crystal, and see how the dissevered tremors of the ray reäpper on the screen in a band of many-hued light—red, blue, orange, green, yellow, and violet, blending into each other by most delicate gradations, and all glowing with a richness which no mortal pencil can copy. Substitute for this crystal prism, one of diamond,—suppose the Koh-i-noor, that "mountain of light," used as a refractor of the sunbeams—as a breaker-up of the symmetry of the solar ray,—and then imagine how brilliant would be the spectral colors thus produced. The lustre of the diamond, the topaz, the ruby, the emerald, the amethyst, is well known; but how comes that lustre which so distinguishes them from other substances? It is because they, of all earthly substances, are the most ethereal in their structure, and hence vibrate and sparkle most readily in unison with the solar rays. Take a diamond out of the sunlight into a dark room, and you will see it still lustrous for a few moments, because its particles are still vibrating. All substances—air, water, wood, and rock—consist of identically the same atoms, only variously arranged, each possessing different qualities according to the closeness and form in which the particles of their molecules arrange themselves. Thus, carbon,† when in its amorphous state, is charcoal; when crystalised in prisms, it becomes black and opaque graphite; and when crystalised in octohedrons, it is etherealised into the limpid and transparent diamond. Gems, in truth, are of all earthly substances the most similar in atomic structure to the ether—to that pure and subtle fluid pervading all space, which gives birth to the lightning, and whose vibrations are heat and light. They are formed in the veins of the rock by the slow and continuous action of electric currents, which, in the lapse of ages, gradually alter the arrangement of the ultimate atoms of the rock, crystalizing them in forms congenial to their own ethereal structure.

Science can imitate in some degree this rarest and most beautiful of nature's processes. "There is strong presumptive evidence," says Mrs. SOMERVILLE, "of the influence of the

* From *Blackwood's Magazine.*

† We do not think that the truth of the Atomic Theory admits of argument. It is irrefragably demonstrated by the pure light of reason, and it has now been all but demonstrated according to the Baconian system of experiment. Already some of our most positive and practical inquirers confess themselves within an ace of accepting the doctrine. Professor FARADAY says: "The philosopher ends by asking himself these questions,—in what does chemical identity consist?—whether the so-called chemical elements may not be, after all, mere allotropic conditions of purer universal essence?—whether, to renew the speculations of the alchemist, metals may be only so many mutati ns of each other, by the power of science naturally convertible? There was a time when this fundamental doctrine of the alchemists was opposed to known (fancied?) analogies; it is now no longer opposed to them, but only s me stages beyond their present development."—*Lectures*, p. 105–6.

electric and magnetic currents on the formation and direction of the mountain masses and mineral veins; but their slow persevering action on the ultimate atoms of matter has been placed beyond a doubt by the formation of rubies and other gems, as well as other mineral substances, by voltaic electricity." What flowers are to the vegetable world, gems are to the mineral. Both of them are embodiments of the beautiful; but the latter are of a purer substance, and, if slower of growth, only the more imperishable.

A science of color must be based upon a correct theory of light. We believe the foundations of such a theory already exist. The carefully-conducted though much contested experiments of VON REICHENBACH tend to show that all polarised bodies—such as magnets, crystals, and the like—give off a subtle light of their own, which becomes visible in a dark room to persons of a sensitive nervous organisation. We certainly know that the earth radiates a light of its own, as exhibited in the beautiful coruscations of the aurora-borealis and the zodiacal light;—the explanation of this phenomenon being, that our planet is a large magnet, through which, as in all polarised bodies, there is a constant passage to and fro of electrical currents, which ray off in light from the poles. It will ere long be discovered that every planet is luminous, although its light may be overpowered by that of some larger orb—even as a taper's light is unnoticed in the full blaze of the sunlight;* and one of the most fundamental canons in optics will be, that every body radiates more or less of light when its particles are in a state of electrical vibration. The sun and its planets being in opposite states of polarity, a constant magnetic efflux is flowing from each to the other,—this efflux occasions a thrill, or vibrating motion, in the ether which fills the interstellar spaces,—and the result of this vibratory motion on the eye is light; just as a spark, or continuous stream of light, is the concomitant of a similar flux from an electric machine.

Under the full blaze of the sunlight, the earth throbs as with a million pulses Those substances which are most ethereal in their atomic structure, such as glass and crystals, vibrate most readily and most powerfully; but all things, even the most amorphous in structure, join more or less in the electrical pulsation—transmitting, reflecting, and modifying into colors, the limpid light which streams from the sunny skies.† When the sun sets, this vibratory motion of the earth's surface to a great degree ceases, is feebly kept up by the cold radiance of the moon, or fades into almost quiescence beneath the tremulous light of the stars. Put out the stars, and all seems absolute darkness. But is it so? We trow not. Draw the thickest curtain of cloud over the sky,—let neither moon nor star, nor feeblest glimmer of the violet-colored skies of night break the darkness; and yet, while men grope and stumble, and call to their aid the appliances of luciferous art, myriads of the lower creation—birds of the air, fish of the sea, and prowling and creeping things without number, ply their life as easily as if with them it were not night but day. What does this show, but that light and darkness are but relative terms,—that what is night for man, is day for other

* The great HERSCHEL expressly admits the correctness of this important and self-obvious, though little-thought-of truth, when speaking of the systems of Double Stars, and of the revolution of sun round sun, he says—"Each accompanied with its train of planets and their satellites, closely shrouded from our view by the splendor of their respective suns."—*Outlines of Astronomy*, Chap. xvi. §847.

† This vibratory action is indispensable in the process of vegetation; and, in regard to the prodigious effect of this vibratory influence of the solar rays, Prof. GREGORY says: "It has been calculated that the mechanical force exerted by the sun upon the amount of wood growing on one square foot of surface, in the course of a year, corresponds to what would be required to raise a weight of 486,000 pounds to the height of one foot; and this is only 1-11th of the whole effect of the sun's rays, of which only 1-5th reaches the plant, and half of that is lost."—*Handbook of Organic Chem.* p. 482.

creatures; and that even in night-time the surface of the earth is vibrating, far too feebly, indeed, to excite vision in man, but sufficient for a vastly wide range of animal life, to whom eyes have been given extremely susceptible to the ethereal vibrations. The great CREATOR has furnished each class of his creatures with visual organs fitted for their peculiar sphere of action; and man, made for the day and the sunshine, has eyes whose range of discernment is limited to the diurnal phenomena. His organ of sight is adapted for a certain degree of light, more or less than which tends equally to blindness. He is not more baffled by the shadows of night than by a superabundance of the illuminating rays. Light itself may become darkness. The eagle gazes undazzled on the orb of day; but to us, the sun in its noontide splendor is an invisible spot in the sky; and "dark from excessive bright," is a phrase not more poetic than true. Since, then, our range of vision is thus limited, let us beware of dogmatising as if light were a word of absolute instead of relative significance; and although we may not be able to see what REICHENBACH's sensitives saw, still less to walk by the feeble rays which suffice for the lower creation, let us confess that the auroral and zodiacal lights, as well as all sound reasoning, show that Earth has a light of her own, by which it is as seemly that some orders of creatures should walk, as we, children of light and of the day, by the nobler radiance of the sun.

It is known to men of science that every part of nature, even the hardest and most solid, is in a state of molecular motion, so subtle, as in most cases to defy occular scrutiny, yet indubitably revealing itself in its effects.* It is only when those vibrations grow strong and frequent that they become perceptible to our senses; and then they do so in the form of those ether-born twins, heat and light. Let us examine the spectrum, and see how this vibratory motion exhibits itself in the production of color. To the ordinary eye, the spectrum, produced by refracting or breaking up the symmetry of the solar beam, is merely a series of hues, beginning with red, brightening into yellow, and then fading away through violet into darkness. But if you examine it scientifically, you will find that those bright hues are produced by a series of tremors or vibrations of the broken ethereal ray; the strongest and slowest of which vibratory rays are least refracted, and form the red, and the feeblest and most rapid are most refracted and form the violet. But the whole of the broken rays are not represented by the colors which meet the eye in the spectrum; for at either extremity, where the red and violet fade out of sight, a succession of rays spread out, invisible to our eyes, but which might be to some extent discernable had we the night-eyes of some of the lower animals. The invisible rays at the red end are the strongest and rarest in the spectrum, only showing themselves by giving out heat, and an electricity which is positive; those at the violet end are the feeblest and densest,—only showing themselves by their chemical or actinic properties, and by an electricity which is negative. Thus the spectrum exhibits a complex phenomenon. Firstly, we have a series of rays steadily increasing in rapidity and weakening in force of vibration, from one end to the

* "Nothing can be more certain," says Mrs. SOMERVILLE, "than that the minute particles of matter are constantly in motion, from the action of heat, mutual attraction and electricity. Prismatic crystals of salts of zinc are changed in a few seconds into crystals of a totally different form by the heat of the sun;—casts of shells are found in rocks, from which the animal matter has been removed, and its place supplied by mineral:—and the excavations made in rocks diminish sensibly in size, in a short time, if the rock be soft, and in a longer time when it is hard: circumstances which shew an intestine motion of the particles, not only in their relative positions, but in space, which there is every reason to believe is owing to electricity,—a power which, if not the sole agent, must at least have co-operated essentially in the formation and filling of mineral veins."—*Physical Geography*, I, Chapt. xv. p. 288–9.

other: (similar in this respect to the atmospheric vibrations which produce sounds which emerging from silence as the spectral colors emerge from darkness, run through the scale of the musician, getting quicker and feebler in their vibrations, until they again become inaudible,—the ear hearing sounds as the eye sees colors, only so long as the vibrations continue within a certain range of velocity and force, which varies somewhat in different individuals and animals,—the savage Indian, for instance, hearing sounds and seeing objects where we can see or hear nothing; and dogs and the lower creation exhibiting the same powers to a still greater extent).* But superimposed upon this steadily ascending gamut of vibrations, we have another phenomenon, namely, that one-half of the rays of the spectrum are electrically positive, and give out heat, and that the other half are negative, and produce chemical action;† and that in the center, those opposite influences neutralise each other. The varying phenomena of color, then, are not owing to a mere difference in the vibratory speed of the rays of the spectrum, but also to the electric difference of these rays, which, positive at the red end, and negative at the blue, flash up into yellow or white light in the center where they meet.

In considering, then, the impression made on our eye by the colors of the spectrum, there are two points to be considered. In regard to illuminating power, the strongest point of the spectrum is the yellow,—in point of vibratory power, it is the red; and the color which makes the strongest impression on our visual sense is the red-orange, or scarlet, which, lying between the red and yellow, combines in fullest force the illuminating and vibrating powers. Hence it would appear that color is a vibratory phenomenon of the ethereal rays,—intermediate between heat on the one hand, and actinism on the other, and attended by an overlapping of the electro-positive and electro-negative rays, of which heat and actinism are the representatives. But whether heat and actinism are not themselves the necessary products of a certain rate of vibration in the ether, and so the whole phenomenon of color be practically reducible to one of ratio of vibration, we do not profess to say. Men will get at the root of all those things by-and-by. Meanwhile, it is instructive to observe, from the paper upon radiant heat, lately read before the British Association, by Professor Powell, that heat rays, or rays emanating from a hot body, when refracted, present identically the same phenomenon as those of light, namely: that the rays of the heat-spectrum which vibrate most slowly have a heating but not an illuminating power; those of greater velocity, a luminiferous property also; and those of the greatest velocity, little heating or luminiferous, but higher chemical power. The reflected rays from the moon form a curious illustration of these and our preceding statements,—the strong electro-positive heat-rays of the solar beam being absorbed by the lunar orb, while the feebler and more rapidly-vibrating rays are reflected to our planet, and bring us a certain amount of illumination combined with a strong chemical influence; which latter shows itself, *inter alia*, (especially in tropical countries), by the well-established fact of the rapid decomposition of butcher-meat, &c., when exposed to the lunar beams.

*There is a Boajesman tribe in South Africa, who exhibit in a remarkable manner the phenomenon call *Nyctalophia*,—sleeping and resting during the day, when their eyes, either from natural or acquired organization, cannot bear the light of the sun, and carrying on their main pursuits during the night.

† It is this difference in the chemical action of the various rays which produce color that constitutes the greatest stumbling block in the way of photography,—the colors at the blue end of the spectrum making an undue impression on the chemical surface compared with the others. This difficulty is being obviated, but much as photography has achieved, we believe the art is still in its infancy.

My Life in the Country:

OR, CHRONICLES OF OAKLAND HOME.

BY FRANK HAZLETON.

CHAPTER I.

DETERMINES TO LIVE IN THE COUNTRY.

Our large cities are enlarging their borders and daily becoming more crowded by the industrious and earnest pursuers of wealth; yet there are few in this eager crowd who are not looking forward to the happy time when the accumulations of skill and toil shall enable them to possess a home in the country, where they can enjoy their well earned treasures. The merchant, confined to his counting-room, his mind absorbed and wearied by business cares, longs ardently for the time when he can leave stocks and markets, to other and younger heads and hands, and breathe once more the pure air of the country, and drink again at the bubbling brook, as in earlier and happier days. This thought lightens his toils by day, and furnishes pleasant dreams by night. Even now, in imagination, he walks the green fields, climbs the hill-side, and reposes in shadowy groves, where gentle zephyrs cool his heated brow.

"Mid the crowds I need must linger,
Aye, and labor day by day;
But I send my thoughts to wander,
And my fancies far away.

* * * * * *

Little wot you, looking upward
At the smoke wreaths low'ring there,
That my vision is not bounded
By this dull and murky air;
That those thick, close streets and alleys
At my bidding vanish quite,
And the meadows ope before me,
And the green hills crowned with light."

Many, impatient of delay, are possessing themselves of suburban residences, near enough to the city to allow them to attend in a measure to daily business. Here they can enjoy most of the pleasures of country life. Many more are compelled "'mid the crowds" to "labor day by day" with little prospect of release; yet the imagination is free—hope is still in the ascendant;—there is an earnest waiting for the "good time coming."

All who are thus eagerly longing to enjoy the pleasures and endure the toils of a country life have not a very perfect idea of the former, and of the latter their notions are not more clear. Few who desire a country residence are prepared to enjoy a COUNTRY HOME. If the relation of my experience in adapting myself to such a home, and in forming a place to meet somewhat my wants and wishes, shall be of

service to the great army who have their faces set country-ward, my hopes will be realized.

It was on one of those very warm days common in August that I determined to commence life in the country. I was walking leisurely from my office, in the business part of one of our commercial cities, to my home in the upper part of the town. The stages rolled by, and as the drivers cast inviting glances toward me, I mentally discussed the advantages to be gained by the outlay of a six-pence in this way, and soon rejected the idea of packing myself into a crowded omnibus, as suffocation under such circumstances, on such an afternoon, seemed almost certain: so choosing the coolest side of the street, I summoned my flagging energies for the walk before me, comforting myself with the thought that of the two evils I was choosing the least. I fear my statement that it was a very warm day will give my readers who are so happy as to live in the country, surrounded by cool groves and rippling streams, and where the pure air sweeps unobstructed, but a faint idea of the state of the weather, or the amount of suffering necessary to drive me to the resolution to leave the city. For two weeks, each succeeding day had surpassed its predecessor, and the thermometer continued to rise, and the energies of the people to fall, until "every thing that had life" languished. The usual health salutation was forgotten, and as friend met friend, "how hot!" was to be heard on every side. Man and beast suffered alike. The horse fell down before his load, to rise no more; the driver fell from his seat; and the laborer expired in the midst of his labors.

I had taken my family to the country a week previous, for a little relaxation, and although my children were blessed with tolerable good health, I became seriously alarmed when I contrasted their delicate complexions,—the white skin so transparent, the blue veins so visible,—with the rugged, vigorous appearance of their country cousins, whose every look and action spoke of overflowing health and happiness. After becoming familiar with the healthy faces of my friends, I did not feel very well satisfied on viewing my own countenance in the mirror, although in my more youthful days I had derived some satisfaction from this source.

On the previous day I had returned to the city, and enjoyed by the way, for the first time in many years a moon-light ride in the country. The cool breezes, the beautiful prospects, the illuminated sea of glass, as suddenly an opening through the trees, or a turn in the road gave a view of the river—all this may be felt but can not be described. Now, the streets seemed narrower and dirtier—the houses higher and more compact—the air more impure and suffocating—the heat less endurable than before my visit to the country. The bill of mortality for the last week seemed more terrible than ever. The city seemed to me to be fast becoming the great slaughter-house for children. Women, "weeping for their children, and would not be comforted because they were not."

My mind was busy with such reflections, and before I reached my home, I had resolved to seek a home among the green fields. I would no longer sacrifice health and comfort in the pursuit of wealth. "I am not rich," I said half-aloud, "but I have something, and with care, enough to make me a comfortable, tasteful home in the country."

OAKLAND HOME, AS I FIRST SAW IT.

CHAPTER II.

PURCHASES A "PLACE."

The matter settled, I began to prepare myself for my new occupation, by purchasing such books and papers as would be likely to render assistance. I soon added to my library *Downing's Landscape Gardening*, and other works by the same author; *Barry's Fruit Garden*, the *Horticulturist*, and other books and journals, and commenced their study in good earnest, supposing that I could fit myself in "a few short, easy lessons," to accomplish wonders in the country.

It may be as well for me to remark at once that I knew nothing of farming. After leaving school I had taken a clerkship in the village store, and after learning all the arts and mysteries of country "*store*" keeping, I removed to the city from which I had now resolved to take my exodus. My wife was much better fitted for our new vocation, as she was one of our customers at the old country store—a daughter of a farmer in the neighborhood; and although I can not say as much for others, we certainly had one customer who made some very desirable bargains—as I had good reason to know, and my employer didn't.

The announcement of my determination caused no small joy in my family, as I had every reason to believe it would. The children began to anticipate a feast of good things. Pure milk and bread, and new butter; fresh Strawberries and cream—real cream; and honey gathered "from every opening flower," was to be free as water. "*Our farm*, like the promised land, was to "flow with milk and honey." Little

baskets that had laid for years among neglected toys, again saw the light. These were to be filled with Strawberries and Blackberries. The boys were making whips; the horses and cow were named, and the ownership satisfactorily divided among the young and zealous members of the family.

My first business, of course, was to select and purchase a "place," and I carefully examined the advertisements in the daily papers, particularly the columns headed "*For Sale*," and made several journeys to examine some "*Rare Chances*," and a number of "*The most desirable bargains in Real Estate ever offered.*" At last, after becoming somewhat wearied in the search, I found a small farm, the owner of which was anxious to go West to buy a larger one, and made a purchase.

The extent of the domain was about thirty acres. The land was said by the neighbors whom I consulted, to be "pretty good, *but rather hard run.*" At this time I had but little idea of the meaning of these simple words, "rather hard run." The land I purchased had formerly been part of a large farm, owned by a person in a distant city, and had been "rented out" as long as "the oldest inhabitant" could remember. A few years since, the thirty acres constituting my purchase was sold to my predecessor. The land was beautifully level, and almost entirely free from trees and stumps. On one part of the farm was a little uneven land—a pretty ravine,—and here a few trees had been allowed to remain. This spot had been selected by the former occupant as the site for his house, more, I imagine, for the convenience of procuring logs for its erection, than from any appreciation of the natural beauty of the place. He exhibited but little love of the beautiful in destroying so many fine trees to make so poor a house.

Foreign Notices.

The New Fuchsias of 1854.—Birmingham has hitherto been justly celebrated for the introduction of new Fuchsias of first-rate quality, but I regret that this season there has been a sad departure from so wholesome a rule, and that their three new ones, *Duke of Wellington*, *Trentham*, and *Fanny Webb*, do not merit a position side by side with the *Queen of Hanover*, *Telegraph*, *Vanguard*, and other new ones. The public was led to expect a Fuchsia of first class excellence in the *Duke of Wellington*, but with me as well as with others where I have seen it, it is coarse and deficient in color—the sepals are dull in color but well reflexed, tube rough and fluted, and corolla not deep enough in color, even in the young state; it is however a free bloomer and of good habit. I cannot class this as by any means a first-rate Fuchsia. *Trentham* is a coarse monstrosity, tube and sepals dull scarlet, coarse, and does not reflex. Corolla pale blue purple, with scarlet vein, extending from the base of each division of the corolla, which in almost every flower is a malformation. The plant is long jointed and of bad habit. *Fanny Webb* has a pinkish white tube and sepals, with a green tip and rose colored corolla, flower small and not attractive. I shall not grow either of these three varieties again, as the two latter are really worthless; and the *Duke*, although so free a bloomer, is so deficient in color and quality that I shall reject it. *Clio* is a large, bold, free-flowering variety, in the way of *England's Glory*, with each flower large and well proportioned, and reflexing, although not so gracefully as some other varieties. It has waxy light tube and sepals, with a bright scarlet corolla, and being a dense bloomer, of good habit, with large flowers, it will please all. The gem of the season, however, is *Queen of Hanover*, which in my opinion has every good point a Fuchsia should possess. The tube is well formed, pure white, with gracefully reflexed sepals of the same color—the corolla is bright scarlet, close and well formed. In habit it resembles *Pearl of England*, and is a very free bloomer. *Standish's Perfection* has a large light waxy tube with pale pink corolla, the sepals having too much pink color in them, and do not reflex well. It is a very free blooming variety, but does not please me, and I think will disappoint many. *Elegans* is a *gem*, having a profusion of flower, with but moderate foliage, and is of excellent habit. The flower is of medium size, tube and sepals glossy scarlet, the latter reflexing most gracefully to the top of the tube, corolla exceedingly well closed and of a dense purple color. This is a great improvement on *King Charming*. *Monarch* has not bloomed yet, so that I cannot remark on it. *Vanguard* is a short-jointed variety, of excellent habit, tube short, of a glossy scarlet color, sepals broad and of the same color, and reflexing, although not gracefully; corolla rich purple, well closed, but a little stained with scarlet close to the sepals; notwithstanding, it is a first class variety. *Autocrat* is well named, as it is a bold assuming variety with exceedingly large flowers, which, however, are more striking than handsome. The tube is of medium length, thin, and very smooth—sepals long, stout, smooth on the outer side and rough inside, reflexing almost perpendicularly to the foot-stalk; corolla in the young state dense purple, changing as it ages to a deep chocolate color. This is a very distinct and striking variety. *Telegraph* is a very good flower, scarlet tube and sepals, the latter a little too close upon the dark well formed corolla. This variety reflexes well and is of very good habit. *Charmer* is a well reflected light variety, with a white tube, and sepals of the same clear color, rosy-purple corolla, a very free bloomer, and of good habit, and very dissimilar to existing varieties. *Magnifica* has a well formed tube, with gracefully reflexed sepals, both of a bright scarlet color, and rich blue purple; well formed corolla, a very free blooming and distinct variety, of excellent habit. There is in the corolla of *Omega* a beautiful bright slate blue color that I have not

observed in any other variety; the tube and sepals well formed, glossy scarlet, and well formed corolla, a very pleasing reflexed variety. *Othello* is a small flowered variety, short tube and sepals, bright glossy scarlet, and of good substance, reflexing moderately — small purple corolla, changing to rosy purple as it ages; short vigorous growth and a very free bloomer, and will make a capital bedding variety. *Miss Hawtrey* has a large stout tube, the sepals stained with pink and moderately reflexed, well formed light scarlet corolla, very free, and a good second-rate flower. *Macbeth* is a free growing variety, in the way of *Glory*, with intense scarlet tube and well reflexed sepals of the same color, deep blue corolla stained with scarlet. Of last year's varieties, *Glory* is one of the best dark kinds, reflexing well. *Lady Franklin*, waxy white tube and sepals, reflexing moderately, rosy-violet well formed corolla, a large, distinct, and handsome variety. *Lady Montague* is a large reflexed flower with pinkish white tube and sepals and rosy-purple corolla, which is rather coarse, still it is distinct and effective in collections. *King Charming* reflexes most gracefully, tube and sepals scarlet, blue purple corolla. and is a very pretty variety. *Dr. Lindley* is good — bright scarlet tube, and sepals stout and smooth — thick, well formed, close blue purple corolla. *Duchess of Lancaster* is a great favorite, as it is an excellent bloomer and very distinct, flower large, waxy clear white tube and sepals, well reflexed, corolla soft rose color but badly formed. It is, however, a very striking variety and should be in every collection. *England's Glory* is also a bold, striking, light variety. I am aware that the varieties I have described will not answer the descriptions in some places, but when the plants are well cultivated they will be found correct. OBSERVER.

[Our own experience fully confirms the facts expressed above. Perhaps we should have more strongly condemned one or two of the new varieties. In the list of old kinds, *Banks' Perfection* deserves a place as a good free-flowering dark variety, and is particularly fine in a large plant, as must have been observed by those who saw BRAY's plant at the Regent's Park.—Editor.]—*Florist, London.*

ROSES OF 1854.—Never since Roses have been cultivated in England to any extent has such a fatal season as the past been experienced by the growers. The severe frost in winter killed nearly all the buds of the Tea-scented and other delicate Roses, and numbers of the plants. The dry weather in March and April destroyed from half to two-thirds of the stocks planted in December; and the frost on the 25th of April so injured the young and tender shoots, which were soon after smothered with aphides, that scarcely any Roses bloomed at their usual season in June and July. It was not till August that the *Hybrid Perpetuals* showed themselves in character, and after that they flowered satisfactorily. As usual with a favored class of Roses like the above, we are inundated with so-called novelties from France, plenty of variety in names, lacking, however, difference in character; but there are some few really good and distinct, and quite worthy of a few words of praise, and so I will endeavor to describe them. Hybrid Perpetuals are *the* Roses of the day; they seem destined to supply all out-door wants at least, and one is never tired of their varied beauties. There were forty or more Roses of this class alone, with new names introduced last winter and spring, most of them of the same unvarying tints of "rose," "pale rose," and so on; many of them really good, but not differing enough from well established varieties to make them acceptable to the amateur. There are, however, few and a very few, distinct, good, and acceptable to all lovers of Roses; and who is not? Holding a first rank among the few is *Jules Margottin*, which is quite worthy of its descriptive English name, *Perpetual Brennus*; its very vigorous habit, and large finely-shaped light vivid crimson flowers, remind us much of that very fine old *Hybrid China* Rose, *Brennus*. For growing on its own roots, and pegging down, for a pillar Rose, and as a standard, it is equally well adapted, and will soon be in every Rose garden. *Sir John Franklin* and *Gloire de la France* are of the race of the *Géant des Batailles*, and two fine robust growing Roses; the former bright red, the latter more approaching to deep crimson; they are two fine varieties. *General Jaqueminot* is, like the above, one of our new Roses, and most striking, from the size of its flowers, which are of rich shaded crimson. It has, however, two faults — its flowers are not sufficiently double, and its habit of growth is rather slender and delicate. We now require

Roses perfect in all points; large and double flowers, opening freely, fine healthy foliage, and a vigorous hardy habit. *Duchess of Norfolk* will probably form a nice pillar Rose. Now we come to a host of new names applied to Roses, with shades of rose color and pink, such as *Alphonse de Lamartine, Colonel de Rougemont, Madame Domage* (both varieties of the race of *Baronne Prevost*), *Ceres, Glorie de Parthenay, La Ville de St. Denis, Lady Milsom, Madame Hector Jacquin*, a large and vigorous growing Rose. *Madame Harriet Stowe, Aline Gilbon, Mademoiselle Quetel, Marie de Bourges, Sephora, Triomphe ex Beaute, James Veitch, Leon Plee*, and several others, all pretty enough — for what Rose is not? — but with very little distinction in their characters. *Gervaise Rouillard* is a cheat; it is the old *Hybrid China, General Lamoricère*. Some few of the Roses among the *Hybrid Perpetuals* introduced, in 1853, have bloomed this season in great perfection, and have proved themselves worthy of a place in every Rose garden. Such are *Prince Leon Hotetchoubey*, or simply *Prince Leon*, which is a shorter and better name and *Paul Dupuy*, two charming Roses. *Alexandrina Bachmeteff*, with its brilliant carmine flowers, is also a great acquisition, as is another Rose, with a tiresome Russian name *Prince Chipetouzikoff*, with brilliant deep flowers; *Adame Paul* is too double and large to open well in our climate. *Souvenir de Leveson Gower* is a magnificent crimson and first-rate Rose, and *Triomphe de Paris*, very dark crimson, has also bloomed beautifully. *Lady Stuart*, of the same color, is not equal to *Madame Rivers*. *Victoria* has not opened well, and seems tender, as it suffered much by the winter. *Archimede, Volta*, and *Ferdinand Deppe*, are good rose-colored and pink Roses, but not distinct enough. Among Bourbon Roses we have but one this season really worthy of attention, viz., *La Quintinie*; this is most superb, its deep crimson flowers are of the most perfect shape; but it has one fault, it is delicate in its habit, and requires the highest cultivation. *Francois Henrica*, also a new Rose of this class, is too much like *Prince Albert* and *Surpasse Comice de Seine et Marne*. In Tea-scented Roses, we have one really fine and distinct, viz., *Gloire de Dijon*; in its foliage, habit, and shape, and size of its flowers, it is almost an exact resemblance of the Bourbon Rose, *Souvenir de la Malmaison*, and, like that fine Rose, it requires dry warm weather to open its flowers in perfection. Its perfume is Tea-like and powerful, and in color it is quite unique, being tinted with fawn, salmon and rose, and difficult to describe. *Auguste Vacher* is also a new Tea Rose, perhaps too much like *Noisette Ophirie* in color and habit to be highly esteemed. It is long since we have had any new and good Noisette Roses; but this season a new variety called *Augusta* has been sent from America, which has bloomed in great perfection; it is of the race of *Solfaterre*, and resembles it closely in habit; its flowers are, however, more double and globular, remarkably elegant in shape, and in the center of its flower it is a little deeper in color. Another new Noisette Rose is *Marie Charge*, of the *Ophirie* class; its flowers are larger, more brilliant in color than that well-known Rose, and its habit seems very vigorous and hardy.—*T. Rivers, in Gardeners' Chronicle.*

M'Glashan's Transplanting Apparatus.—We read in the *Moniteur* as follows:—Some new experiments with a machine for transplanting trees, invented by Mr. Stewart M'Glashan, took place at St. Cloud, by the desire of his Majesty the Emperor, who wished the first trial to be made in the Bois de Boulogne, in order that her Majesty the Empress might honor it with her presence. M. Mathieu, head of the gardens of St. Cloud, directed these experiments, which were as successful as the preceding one. It was tried upon a tree of about thirty feet high, and more than twenty inches in circumference, which even a force of twenty horse power could scarcely have raised from the ground, supposing the preliminary operations all complete, such as removing the earth from around the roots, in order to facilitate the transplanting of the tree. The tree in question was an *Acacia*, naturally firmly fixed in the soil, its straight roots offering a great resistance, which must have subjected the machine to a very hard trial. Twenty minutes sufficed to uproot and replace the *Acacia* in its former hole. The principle of Mr. Stewart M'Glashan's machine was so powerful that with an apparatus of reasonable dimensions it would be possible to remove the largest trees, such for example as the Elms and ancient Chesnuts of our public promenades. A third experiment was tried under the direction of M. Mathieu at Villeneuve l'Etang near St. Cloud, upon an Apple tree, which was very difficult to transplant, but the attempt proved perfectly successful.—*Gardeners' Chronicle.*

COVERING FOR FRAMES AND GREENHOUSES.—In the report of the meeting of the London Horticultural Society for December 5th, we find the following:

"The dearth of Russia mats has caused people to look for other kinds of winter protections to supply their places, and among other things the old kind of coverings made of long Wheat straw woven together with tar twine has been found to be a cheap and good substitute. These were wont to be made on a floor or bench; but it occurred to Mr. BREWER of Pine Apple Place, that a better way of making them than that might be devised. He accordingly invented a contrivance for the purpose, a model of which he exhibited. It resembles a small clothes-horse with upright spars in it, to which was fastened a slight wooden frame by means of moveable pins. Between these two frames the covering is woven, each succeeding tier of straw being thus kept in its place till it has been tied by the tar twine, and when the frame has been filled with made-covering the moveable pins are withdrawn and the covering allowed to slip down, leaving the frame empty and ready to be filled again. The advantage of the contrivance is that it allows the operator to stand upright and thus to work with greater ease and speed. In this way it was stated that a straw covering four feet wide and six feet in length, and equal, as far as protection from frost is concerned, to a double mat, could be made for 9*d*, including labor and material. A Certificate of Merit was awarded to Mr. BREWER for his contrivance."

PROPAGATION OF FANCY PELARGONIUMS.—About the beginning of February is as good a time as any for taking cuttings; select some good tops from the very best sorts that are out; get as many thumb-pots as you will require for the purpose; fill them with rich turfy mould, and put one cutting into each pot; but previous to filling the pots let them be well drained with broken charcoal or potsherds; then with a piece of round stick make a hole an inch deep, fill it with silver sand, and then put in the cutting, giving the pot a slight tap on the potting-board to settle the soil; dip a piece of stick into some water, and hold it downwards, in order that three or four drops may fall close to the side of the cutting; this will settle the whole together, and the quantity of water will be quite sufficient for three or four days; after that add a little more in a similar way, or with a fine-rosed watering pot as may be thought needful. When you have finished this part of the work, let all the pots be plunged in a slight bottom-heat, say from 65° to 70°; give a little air in the daytime, to prevent the cuttings from damping off.—*R., in Gardeners' Chronicle.*

WAITE'S DAN O'ROURKE PEA.—I quite agree with the writer of your Calender that this is an invaluable early Pea. In January last I purchased two quarts of it, which I sowed on the 3d of February; on the 12th of April they were one mass of bloom; by the 1st of May I gathered pods fit for table, and by the 24th the forward pods were too old for use. I have been accustomed to consider the 24th of May early, even for the first gathering, to say nothing of having them spoiling for want of using. The flavor of this Pea is excellent, the pods are large and full, and universally admired.—*H. Arnold, in Gardeners' Chronicle.*

Editor's Table.

Apples for Illinois and Adjoining States.—At the meeting of the Northwest Pomological Society, held at Chicago in October, 1853, a resolution was passed "That each member should hand to the Secretary a list of such fruits, over his own name, as have been tested is his neighborhood, and have proved positively good." In compliance with this resolution, twenty-two members handed in lists. These we published in our last volume. An examination of these lists, with a view to ascertain the relative popularity of the different varieties of Apples, gives the following results. It may be proper to state, however, that of the twenty-two members who reported, fourteen were from Illinois, three from Iowa, two from Indiana, and three from Michigan. The numbers following the names in the list, denote the number of members who recommended the variety:

Early Harvest—20,	Rhode Island Greening—12,	Am. Summer Pearmain—9
Carolina June—14,	Maiden's Blush—11,	White Bellflower—8,
Rawles' Janet—12,	Fameuse—10,	Swaar—7,
Sweet Bough—11,	Roxbury Russet—9,	Sweet June—7,
Summer Queen—10,	Yellow Bellflower—15,	Summer Rose—6,
Vandervere—9,	Spitzenburgh—12,	Golden Russet—6,
Rambo—17,	Baldwin—11,	Am. Golden Russet—5,
Fall Pippin—14,	Winesap—10,	Newtown Pippin—5,
Winter Pearmain (white)—5,		Keswick Codlin—5.

This list comprises those only which were recommended by not less than five of the twenty-two members. Many other varieties were on three or four lists—such, for instance, as *Belmont*, *Tolman Sweet*, *Jonathan*, *Jersey Sweet*, *Northern Spy*, *Gravenstien*, *Fall Wine*, *Dominie*, *Willow Twig*, *Fulton Milam*, *Westfield Seek-no-farther*, *Pomme Gris*, *Roman Stem*, *Ladies' Sweet*, &c., &c.

It is very evident, however, that although the varieties, selected by nearly all the members—such as *Early Harvest*, *Sweet Bough*, *Carolina June*, *Rawles' Janet*, *Yellow Bellflower*, *White Bellflower* or *Ortley*, *Rambo*, *Fall Pippin*, &c.,—have proved beyond a doubt well adapted to this section, yet the fact that many of the varieties with low numbers attached are comparatively unknown, renders the decision unsatisfactory as far as they are concerned. We have not the slightest doubt but that among these there are many destined to be the most valuable and popular fruits for western culture. In the meantime, however, until they are well tested, our list above gives very important information to persons who are about to plant in that region. Those who have had to buy their experience dearly, can appreciate the value of such hints as may be gathered from the figures.

The annual meeting of the New York State Agricultural Society will be held at Albany on the 14th of the present month. There is to be an exhibition of winter fruit, grain, &c. Liberal premiums are offered.

Ohio Men looking Westward.—The Hon. James Mathews, Coshocton, Ohio, removes in the spring to Knoxville, Marion county, Iowa. M. L. Sullivant, Esq., the great land proprietor of Columbus, has purchased upwards of sixty thousand acres of land in Illinois, mostly prairie, and is setting about hedging it and planting timber trees for shelter and fencing. Ex-Governor Bebb has settled on an extensive tract of fine land in Winnebago county, Illinois; and he and his sons are at work vigorously improving it. Messrs. Sturges and Bigelow, bankers, of Zanesville, have purchased, and are now improving, a tract of about one hundred thousand acres, we believe in Illinois, some twenty or thirty miles south of Chicago. These are all men of taste, and great energy, and will render important service in converting the vast prairies of Illinois into fruitful farms and gardens. Success to them, and to all like them.

Mercantile Biography.—The subject of the article "Mercantile Biography," in the January number of *Hunt's Merchants' Magazine*, is the Hon. Marshall P. Wilder, of Dorchester, Mass. We have read the sketch with great pleasure. It is well written, and shows a correct appreciation of the various talents and traits of character which have rendered Mr. Wilder so distinguished and so useful a member of society. The life of such a man is an example which it is well to lay before the youth of the country, no matter in what profession they may be engaged. To American horticulturists the life and character of Mr. Wilder is of peculiar interest, and we hope soon to present a sketch, among others of a similar character, now in the course of preparation expressly for the *Horticulturist*.

A mistake about the Beurre Superfin Pear.—M. de Jonghe, of Brussels, who has for some months past furnished a series of pomological articles for the English *Gardeners' Chronicle*, stated in that journal, December 2, that the Pear known as *Beurré Superfin*, was originated by Van Mons, fruited by him in 1827, and named *Cumberland*, "in honor of his Royal Highness the Duke of Cumberland;" and M. de J. added that Belgians were surprised that none of the English pomologists recognized it. We think this altogether a mistake,—that the *Cumberland* referred to is our native Rhode Island variety of that name,—and that the *Beurre Superfin*, as is generally believed, did originate at Angiers, with M. Goubault, and is a distinct variety. M. de Jonghe must be careful. We see that he enumerates the *Cumberland* among the best of Van Mons' seedlings.

Isabella Grapes.—E. A. McKay, Esq., of Naples, Ontario County, N. Y., sent us a box of *Isabella* Grapes on the 18th of January, as fresh in appearance and perfect in flavor as they were when taken from the vines. We have never tasted better Grapes at this season of the year. Mr. McKay says: "They have been kept in a cool, dry cellar, without the proximity of sawdust, cotton, or any other foreign substance. I hope you will receive them in good order. My crop the past season amounted to over five and a half tons, or 11,000 lbs.; extent of vineyard, one acre."

The Spiræa Grandiflora.—The October number of *The Flore des Serres* has a colored drawing of this new and very remarkable *Spiræa*. It has snow-white flowers, about as large as those of an Almond. It was sent to England by Mr. Fortune, from China, as an *Amelanchier*; but on examination by Sir Wm. Hooker, was found to be a *Spiræa*, but it is regarded as the type of a peculiar section. It will most likely prove hardy here. We hope to receive some plants in the spring.

THE NEW YORK PARK.—Hon. FERNANDO WOOD, the present Mayor of New York, and by far the most efficient one that New York has had for many a year, refers to the Park in his late Message as follows:

"CENTRAL PARK.—The commissioners appointed to open the Central Park are progressing with the work — since the organization of the Board, it has collected and examined evidence of title to the lands to be taken for the Park; in causing the necessary surveys, maps of blocks and profiles of grades to be made; in personal view of the lands to be taken, and in procuring such information in regard thereto, as may serve to guide to a just valuation of the same; also in determining the area of assessment for special benefit, and procuring maps of the same, and in procuring evidence of the value of the improvements on the land to be taken; and are now engaged in the valuation of the lands themselves. It will be remembered that this Park is to be bounded south by Fifty-ninth street, north by One Hundred and Sixth street, east by the Fifth Avenue, and west by the Eighth Avenue; and will comprehend an area of seven hundred and seventy-six acres, from which deduct State Arsenal, fourteen; Croton Reservoir, thirty-eight; proposed do., one hundred and twelve; Streets and Avenues, one hundred and ninety; belonging to the city, thirty-four — three hundred and thirty-eight; leaving to be paid for, three hundred and eighty-eight; which, by estimating at sixteen lots per acre, makes six thousand two hundred and eight lots to be paid for by the city, and by assessments upon contiguous property. The important question of the valuation of these lots has not as yet been positively fixed by the commissioners. The subject is now before them, and I advise all who are interested to appear at their office. Another question of much public interest, in connection with this matter, is the territorial limit to which the commissioners shall extend their assessments upon property of individuals, and what proportion of the whole cost shall be made a tax upon the city.

"These questions are entirely under the control of the commissioners. I am informed, unofficially, that the disposition of the Board is to extend the area of assessments three blocks east and west, and a greater distance north and south; and to make two-thirds of the whole cost payable by the city. If this be the determination, it can be easily ascertained about what sum the Park will cost. Estimating the average value of the land at five hundred dollars per lot — a liberal estimate — the whole cost would be three millions one hundred and four thousand dollars; deduct one third to be paid by individuals whose property is supposed to be benefitted, it will leave two millions sixty-nine thousand dollars to be paid for by the city — a smaller sum than was anticipated at the time of passing the act. The commissioners expect to close their duties early in the ensuing summer. There can be no doubt as to the necessity of some such Park, conveniently located on this island. In my opinion, future generations, who are to pay this expense, would have good reasons for reflecting upon the present generation, if we permitted the entire island to be taken possession of by population, without some spot like this, devoted to rural beauty, healthful recreation, and pure atmosphere."

THE WHITLAVIA GRANDIFLORA.—We are glad to learn that Messrs. JOSEPH BREOK & SON, of Boston, have received a small quantity of the seeds of this beautiful blue-flowered annual, figured and described on page 37 of our last number, and will be able to furnish amateurs with it. Mr. BREOK writes us that he has no doubt, judging from dried specimens of the flowers, that it will be a great acquisition to our list of *bedding-out* annuals.

KIRTLAND'S MARY CHERRY.—During the Cherry season, I discovered that a graft labelled *Kirtland's Mary* proved by its fruit to be the *Elton*. From it have been distributed, during the last two years, grafts to horticulturists in various parts of the country. The error is no doubt one of my own, but how it occurred I do not know. It would be well for all cultivators of fruit having the first named grafts from me, to test them before they propagate any number. J. P. KIRTLAND.—*East Rockport, Ohio.*

REPORT ON GRAPES.—The following is a very interesting report, by J. FISK ALLEN, to the Fruit Committee of the Massachusetts Horticultural Society.

To the Chairman of the Fruit Committee of the Massachusetts Horticultural Society:—Sir—In answer to your note of the 16th instant, received yesterday, I will say that, generally speaking, the past season has been one peculiarly favorable for ripening Grapes. I shall refer only to such varieties as have ripened their fruit under my own care. The old established varieties, such as *Hamburgs*, *Chasselas*, and *Muscats*, have fully sustained their reputations. The seedlings from the *Hamburg*, *Wilmot's No.* 16, and the *Victoria*, have proved fully equal to their parent in respect of bearing qualities, with proper cultivation its superior.

WILMOT'S new *Black Hamburg* is variable in quality and bearing, and requires full sunshine and a free circulation of air to make it set its blossoms. It should hang upon the vine long after the color has become black, before it is fully ripe and fit for the table. When grown in this manner, it is quite equal to either of the other *Hamburgs*. The *Cannon Hall*, the seedling of the *Muscat of Alexandria*, has likewise proved every way equal and probably superior to that variety. The other sorts in common cultivation, so far as I am aware, have not varied from the usual method or condition at ripening, and may still be recommended to cultivators seeking a number of kinds.

Several seedlings have fruited in my collection; the largest proportion of them proving small, (although of good flavor) have been discarded. One, a very sweet, rich Black Grape, is reserved for further trial, for cultivation under glass.

The *Bronze* Grape, introduced by the Mayor of Boston, Dr. SMITH, from Syria, who brought the seeds with him from that country, has fruited for the first time this year. The fruit closely resembles the *Queen of Nice*. It ripens sooner, and does not keep as well. Two or three seasons should be given before giving a complete description. At present it promises well.

The seedling referred to in a former communication, raised from *Wilmot's New Black Hamburg*, has been this year discarded, having proved too sour.

Of the recently imported varieties said to be seedlings, I have fruited the *Gross Bleu*, and can not distinguish any difference between it and the old *Black Hamburg*. *Cambridge Botanic Garden* Grape is like the *Black Prince*, and not worthy of being considered a distinct variety. *Gross Gromier du Cantal*, is nothing but the *De Candolle*. These vines were received from the best sources, and it is presumed they are correct. *Peree Rose* is another name for the same variety.

For early forcing, the *Pitmaston White Cluster*, and *Musque Verdel* yet remain the best. The *Macready Early White* is inferior in flavor and uncertain in bearing. The new White Grape, which I call *Allen's Hybrid*, promises to be at the head of the list for early forcing.

For retarding I find a difference in the ripening and keeping of the same varieties from year to year. By comparing the list now given, with that of last year, this may be seen. At the head of the list, (and as they are named the one for the other, may be considered as most valuable for their keeping or hanging in a fresh condition,) is the *Wortley Hall Seedling*, the same as last year.

Prince Albert, generally a poor bearer, but as it becomes old bears well, this year has a great crop.

Poitzau Noir, large berry, lacks flavor.

Queen of Nice, very handsome and good.

Syrian, when fully ripe, a rich Grape.

Black Lombardy. There is an uncertainty about this Grape. It has been said that *West's St. Peters* and this are identical. I have the two, both late kinds, and are very unlike. The *Black Lombardy* has a larger berry, and is not so black. It is a valuable sort.

West's St. Peters. Part of the bunches have dried some, and part are fresh; has not done as well as in the previous years, in respect to keeping.

Xeres, or *White Nice*, this year has kept well. It is however uncertain.

Muscat of Alexandria, and the *Cannon Hall*, both of them have dried somewhat; but the flavor of both, if anything, is improved by the process; the berries being large. This drying is not so objectionable as in small Grapes.

Ferrar or *Black Portugal*. A large part of the bunches have this year decayed or dried. Some bunches remain fresh and full.

The old *Black Hamburg* never has kept so well. Some vines have the entire crop yet on, fresh and full, while on the other vines the fruit is much dried.

Wilmot's New, and the *Victoria Hamburg* have not kept so well as the old. In previous years they have kept rather the longest and the freshest.

Hardy Grapes for cultivation in the open air, have had several seedlings added to the list this year. The most beautiful one undoubtedly is the *Concord* Grape. I do not cultivate it myself, and can only speak of specimens as they have come under my observation. In flavor it ranks in my estimation after the *Isabella*. For Massachusetts I should place *Diana* first, and *Isabella* next. Further south, *Catawba* first, and the others in same order.

Hybrid Grapes.—The past season I have fruited several Hybrid vines. Some of them have given fruit of fine flavor, and free of pulp. Several of these have been shown at different Horticultural exhibitions. As early as 1848 it was stated in print that I had planted an *Isabella* in a grapery, for the purpose of impregnation, with the expectation of obtaining a variety that would mature early and be an improvement upon the kinds of hardy Grapes which we already had in cultivation. At that time the seedlings, between forty and fifty in number, were growing, and presented such a marked variation of foliage, as to give good hope of success. Had this been otherwise, further trials by impregnation would have been made. Being aware of the incredulity of many, in the certainty of the origin of a seedling, particularly when it presented a great change from the parent, every means were taken to make the case certain. The parent vine was the only one at the time in the house, it being occupied with Peaches and Nectarines; part of these have since been removed and vines substituted. To be sure that bees or no external cause could effect the impregnation and thus defeat my efforts, the vine was forced in January and blossomed before vegetation commenced in the open air. When the embryo bunch approached the time of blossoming, a few of the strongest were selected and the others, at least all near those bunches, were cut away. Before the blossoming the buds were thinned out, leaving only one fourth part of the strongest and best placed of them. As they expanded, they were constantly watched and the anthers at once cut away with sharp scissors. With a soft brush the pollen from the European kinds was applied. This was collected from a forcing house and was mixed together in a box, having been taken from *Chasselas, Black Prince* and *Black Hamburg*. When the impregnation took effect, the embryo swelled at once; when otherwise, it remained as it was. Thus I was assured that any seed obtained must produce a Hybrid vine. When the fruit ripened, the seed was collected and planted in soil which I felt certain could not have any other seed of Grapes sown accidentally. The young vines have always been under my care. I potted them and repotted them, and planted them out. Those already fruited have proved black in color, all but one, and this being so remarkably early and a very sweet fine fruit, that I at once considered it an acquisition. The seedlings were exposed to the winter, after they had become somewhat grown. The tender ones were killed out, leaving over twenty that have proved sufficiently hardy to withstand our winters, with a slight covering of straw around their roots. This Grape has been named *Allen's Hybrid*. It must be proved now in exposed situations before it can be fully known that it is adapted to culture in the open air in our climate.

The vines that have fruited have all been under glass, not forced however, and in a very favorable situation, fronting north of east, and shaded by large trees. It is questioned if *Black Hamburgs* or *Chasselas* would ripen in this house. There is no doubt of this Grape proving a valuable one for early forcing and the cold grapery. It has been questioned that this is the origin of this variety, and the fact that a white Grape can be produced from a black Grape denied.

It is said that a seed of some European variety must have been in the soil and produced this vine. I cannot deny that this may be the fact. I do not think so, however, and the foliage shows every indication of a Hybrid. N. LONGWORTH, Esq., of Cincinnati, has raised white seedlings from our natives, and a fine white from the *Catawba*. He thinks so at least; the doubters probably will say in his case, also, that he is deceived. The foliage of American kinds is so unlike the European, that the charge of a *Chasselas* or *Sweetwater* seed having been in the soil, can not apply in his case.

It will require two or three seasons yet before those Hybrid seedlings will be so tested as to warrant their introduction into cultivation in the open air.

If you consider these remarks relative to Grapes to be of any public value, you can make what use you please of them. Respectfully Yours, JOHN FISK ALLEN.

LIST OF FRUITS FOR OHIO.—We take from the published report the following discussion on Apples, at a joint meeting of the Ohio Pomological Society and the State Agricultural Convention, at Columbus, Wednesday evening, December 6th, 1854; A. H. ERNST and J. K. GREEN in the Chair; M. B. BATEHAM, Secretary:

The object of the meeting was stated by Dr. WARDER and M. B. BATEHAM, viz: to agree upon a list of Apples to be recommended for general cultivation throughout the State of Ohio.

On motion, it was agreed to take up the several kinds of Apples in the order of their season, as Summer, Fall, and Winter varieties.

Early Harvest was reported as good in all parts of the State—not a profuse bearer, but fair in most localities; does best in rich or well manured soil. Highly approved wherever known. Recommended unanimously.

Early Strawberry.—Highly approved in south and center of the State, also in north-west and north-east. Not much known in some of the northern counties, but does well wherever known. Recommended unanimously.

Large Yellow Bough or *Sweet Bough.*—Gen. WORTHINGTON had grown this extensively for many years in Ross County, and approves it very highly. Was reported good in all parts of the State. Not a great bearer. Dr. WARDER proposed to recommend it only for limited cultivation. Recommended with one dissent.

American Summer Pearmain.—Proposed by Dr. JONES, and highly recommended by all who know it, but passed as not sufficiently known.

Golden Sweet.—Generally known in different parts of the State, and highly recommended, especially for baking, for apple butter, and for stock. Recommended with one dissent.

Maiden's Blush.—Commended by numerous gentlemen, especially for its fine looks and for market. Some like it for cooking and for the table; does well in all parts of the State—is larger and of less flavor south than north. Recommended with several dissents.

Fall Pippin or *Golden Pippin.*—Well known and highly approved in all parts of the State. Keeps best and has best flavor at the north, but is largest at the south. Recommended with one dissent.

Cooper.—Dr. HEMPSTED said he believed the history of this Apple had not yet been fully stated. The grafts were brought from Boston to Marietta by Mr. ADAMS, of Zanesville, who called it a *French Apple*, the original trees having been imported, as he believed, from France. All present who knew the Apple called it first rate; but some gentlemen though it not sufficiently known to warrant its recommendation for general cultivation, especially in the northern part of the State. Recommended with one dissent.

Rambo.—Was pronounced first rate, especially in central parts of the State. Dr. WARDER said it was good at the south, but ripens early, becomes dry, and does not keep as well as at the north. Recommended unanimously.

American Golden Russet.—Gens. WORTHINGTON and GREEN said it was first rate when in perfection, but with them it soon perishes, and is not generally of fair and healthy growth. Mr. STEELE finds it first rate, good size, and trees healthy, considers it the best of winter Apples for the table. Other gentlemen said it was not of attractive appearance, and not good for market; though persons who knew it would buy it. Dr. CONE said trees were not healthy with him. Dr. WARDER considers it first rate—tree of slender growth. Recommended unanimously.

Yellow Bellflower.—Much approved in most parts of the State; not so large and handsome at the north as in central Ohio. Recommended with several dissents.

White Bellflower or *Ortley.*—Mr. ERNST and others from southern Ohio approve it highly; and all agree that it is a good Apple, and adapted to most parts of the State. Recommended with several dissents.

Newtown Spitzenberg.—Very highly approved at Cincinnati, and also in other parts of the State wherever known, for table and for market. Recommended.

Winesap.—Well known and every where approved. Recommended unanimously.

Talman Sweeting.—Recommended by Mr. BATEHAM and several others as very excellent for baking, and as a great bearer, profitable for stock. Passed, as not sufficiently known.

Roxbury Russet.—Condemned by many as uncertain, and liable to speck and rot. Passed as not worthy general commendation.

Newtown Pippin.—Highly commended generally, but Gen. WORTHINGTON and several others found it speck with them. On sandy soils not generally good, also on Beech clay soils at the north. Professor MATHER thought it was good only on limestone soils. General WORTHINGTON thought this and some other *old* kinds are losing their health and vitality. Recommended with several dissents.

Rawles' Janette or *Geneting.*—Dr. WARDER said this was *the* winter Apple of southern Ohio, Kentucky, &c., but he was afraid it was not generally known through the State, especially in the north. Several gentlemen from different parts of the State said they knew it, and approved it highly. Recommended unanimously.

Winter Sweet Paradise.—Specimens presented by Mr. BRUSH, who commended it very highly, especially for baking; read DOWNING's description. Has been grown by WM. MERION, near Columbus, for ten or twelve years. Said to have come from Pennsylvania. Mr. BATEHAM thought it was identical with the *Wells Sweeting*, of Rochester, N. Y. All agreed that it was a first rate sweet Apple. Recommended for general trial.

Broadwell Sweet was highly commended by Mr. ERNST and others from Cincinnati, near which city it originated. ELLIOTT's description was read, and his commendation seconded. Recommended for general trial.

Belmont or *Gate.*—Mr. HUMRICKHOUSE said this Apple was considered indispensable in his region; thinks the tree rather tender. Gentlemen from central and northern Ohio spoke of it as very excellent, and deserving general cultivation. Recommended for general cultivation in northern half of the State.

NEW USE FOR GUANO.—Some time last summer, while budding some young Peaches, I found that ants had taken possession of some ten feet in one row. They very earnestly resisted my attempts to innoculate the trees, inflicting many unpleasant wounds on my hands and arms. In order to disperse the warlike little nation, I sprinkled near a pint of fine guano along the little ridges. This threw them into immediate consternation. I noticed little collections of winged ants huddled close together, and seeming to be quiet, while those without wings ran about in great agitation. The following day not a single insect could be found where the day previous they appeared to be innumerable. A. B. LAWRENCE.—*Woodville, Miss.*

California Items — for most of which we are indebted to the *California Farmer*, an excellent weekly journal, published at San Francisco, by Messrs. Warren & Son:

"Apples of Gold in Pictures of Silver." *How shall they be preserved?*—We were shown one of the most splendid specimens of the *Golden Pippin*, from Oregon, that we presume has ever yet been grown. It was brought to our office by I. C. Woods, Esq., received by him from Oregon. We note the weight, one pound and fourteen ounces — fair and very beautiful. It was Mr. Woods' desire to preserve this noble specimen and send it forward to the Great Exhibition at Paris, if it could be done; we are satisfied, however, of the impossibility of its being done — fruit being perishable in its own nature. However perfect the covering upon the outside, decay would commence within, and in a brief time it would fall to pieces by the decay and pressure of the atmosphere. If the covering were thick, the beauty and originality of the fruit would be lost. The only way of preserving its size, color, and form, is to have a perfect *fac simile* in wax. In this manner a perfect resemblance can be had, so perfect as to deceive the eye. Such specimens of our *best* California and Oregon fruit we have now on exhibition at our rooms. We are rejoiced to see the house of Adams & Co. thus interested in Pomology; we consider it an *express* favor done to the science in general, for which all should rejoice.

Strawberries.—Visions of happy times long gone were recalled to our mind yesterday, when a moderate sized hamper, presented to us with the compliments of Mr. J. L. Sanford, was opened. There, heaped in different bowls, were varieties of some of the most fragrant, the largest and finest Strawberries we have seen in California. The *Boston Pines* were the sweetest, perhaps, but all were delicious. Besides these were heaps of *Burr's New Pines, Crimson Cones, Prolific Hautboys, Rival Hudsons', Early Scarlets*, and the famous *Big Bugs*, which last were the darkest in hue, the plumpest and sweetest smelling. They had all been grown by Mr. Sanford in the Shell Mound Nurseries and Fruit Gardens, near San Antonio, in Alameda County. The plants from which the berries were taken had continued to bear fruit for months. It is something unusual to find berries on them, full grown and ripe, at this late day of the season. Mr. Sanford will receive our best acknowledgements for so pleasant an offering as his Strawberries were.—*California Chronicle, San Francisco, November* 1.

Fine Vegetables.—We have received from the farm and garden of Judge McHenry, at Oakland, some of the finest vegetables we have yet seen grown in this State. They were not so very large, but yet full size, well and handsomely grown; fine grain and smooth skin, finely formed, and giving evidence by their appearance of having been grown in fine, deep, well-cultivated soil. The variety shown us were Beets, Parsnips, and Carrots, as samples of several acres, all of the same quality; finer specimens can not be had. For these, and the kind invitations to visit the grounds we return our thanks, and we already anticipate much pleasure from a ramble over that beautiful spot. We rejoice that our citizens are thus turning their attention to the cultivating and beautifying our bright spots — this, this will make California prosperous.

Apples in Oregon.—The *Portland Oregonian* of the 21st ult., states: "Thomas Pritchard, Esq., of this city, has shown us the finest specimens of Apples we have ever seen in any country; many of them measured fifteen and sixteen inches in circumference, and weighed twenty-eight and twenty-nine ounces. Fifteen or sixteen fill a half bushel measure. These Apples was raised by Nathan Robinson, of this county, (not by Lewellen of Clackamas county,) on trees of only three years' growth. Mr. P. has several bushels of them which he is going to ship to San Francisco by the next steamer. Oregon can beat the world in fruit growing, as a few years will demonstrate."

Who — Beets!—We have received a fine large *Bassano* Beet, from Napa city, through the kindness of H. Dudley, Esq., which weighs 31 pounds. We feel indebted to our friend for the interest manifested in forwarding this specimen. The Beet was grown on the farm of Mr. A. Arnott, one mile from Napa City, and without irrigation the entire season.

Pretty Fine Cabbage.—W. C. Hoff, Esq., has sent us from his fine gardens at the Mission Dolores, a very compact and finely grown Cabbage, of the *Flat Dutch* variety, weighing thirty-two and a-half pounds. If any of our cultivators can beat this, we should like they would bring along their specimens.

Generous Price For Fruit.—Two splendid Oregon Pippins, weighing two and a-half and two and a quarter pounds, and one splendid Pear weighing one and three-fourths pounds, were sold by Mr. Weaver, at Number 1, Washington street, at ten dollars each. What will our fruit growers in Massachusetts say to this?

Best Plants for Hedges.—A gentleman of Skaneateles, N. Y., writes to the *Country Gentleman* as follows:

"In the *Country Gentleman* of the first instant you state 'there is no thorn, properly so called, that can be relied on for hedges,' because 'it is occasionally liable to a sort of disease or blight, that may destroy it after it is grown to a hedge.' This is an old prejudice revived, I fear. In Onondaga, we are practical men — we like proof, and think it preferable to mere theory; accordingly our attention has been for years directed to find the best plant for hedges, and from experiment pronounced the White Hawthorn most suitable. More than thirty years test ought to be conclusive. The Buckthorn has been tried and proved a failure, notwithstanding the puffing of agricultural writers. The Osage Orange is strongly recommended by theorists, but let us see a hedge that will answer the purpose, taking double the time that the White Thorn does, and we may be convinced. In its formidable Thorns the Osage Orange, we are candid to acknowledge, has few competitors; but it is unsuited for farm or country use, being too tender for our rigorous climate. This we state from experience — dearly bought experience.

"There are White Thorn hedges in this section, more than thirty years old, and as sound and good as ever — the older they get, the better fence do they make. The main cause that White Thorn hedges do no better generally, is because improperly managed. We can not state the course we pursue in this respect, as we are guided by circumstances and soil; but we never dig deep for planting."

Osage Orange Hedges in Illinois.—The editor of the *Prairie Farmer*, traveling between Springfield and Alton, says:

"The Maclura Hedge here not only lines the track of the road on either side, but forms, or will soon, the dividing line between fields. They are of all ages, from the first season's setting, to a standing of four or five years. Many of these larger pieces are now the only fence, and no farm animal ventures the trial of passing them. Cattle, horses, mules, sheep, and hogs, all dread them as they would a bed of serpents, and are glad to keep their own side. One or two of the new set pieces are properly cut back; but of the larger ones scarcely a single piece has been suitably thickened at bottom. This is a matter of great importance, and some of them will yet have to be cut to the ground, and thickened over anew. This may be easily done with any poorly grown Maclura Hedge. The cutting should be in the spring before the plants start."

Architectural Criticism.—In reference to doubts expressed in your January number, in regard to the cottages being erected for the prices given, permit us to state, that we will guaranty to have them built in the vicinity of Rochester, by some of our most competent contractors, for the several prices mentioned,— not getting them up expressly for publication, but in every instance being built, or are now in the course of erection. Austin & Warner, *Architects.*

We see by the last number of the *London Gardener's Chronicle*, that Mr. Thomas' recent work —*Farm Implements, and the Principles of their Construction and Use*— has been republished in London with all its illustrations.— *Country Gentleman.*

SEEDLING POTATO.—Accompanying this note, you will receive a few Potatoes,—raised from seed by myself. As you will perceive, they resemble in color and general appearance the *Carter*, a seedling from which variety,—grown near the vicinity of the *Mercer*,—it is. Its edible quality is fully equal to that of its parents, and its character as a yielder is far better than that of either of them, being in this particular *better* than any white variety with which I am acquainted. Its history I will give you as briefly as possible.

Seven years ago last spring I sowed forty seeds, all from the same parentage; in the autumn, I saved the produce of those which gave promise of being superior; this culling left me twenty-five varieties for further experiments. In the succeeding spring I selected such of those as had kept well, and were free from disease. I continued this course each season, selecting such only as were of superior edible character, as well as great yielders, and free from disease. This severe test left me three years since but this one variety, which I shall call the *Wendell Potato*. I have cultivated it since, in order to try it fully, in juxtaposition to the *Mercer*, *Pinkeye*, *Yam*, *June*, *Merino*, and a few others, and it has proved itself a far more prolific variety than either of them—except the last, which you are aware is red in color and of inferior character, and has never shown the least indication of disease, even during the season of 1853, when every one of the other varieties were seriously affected by it. I am thus particular in giving you the whole history of this seedling, not only because I am convinced that it is a valuable acquisition, but because I feel a little vain of my success. Yours very truly. HERMAN WENDELL, M. D.—*Albany, October 30th.*

P. S. I shall place in the care of R. H. PEASE—successor to EMERY & Co.—of this city, a few of the Potatoes for sale, from which they may be obtained by those wishing to give it a trial.—*Country Gentleman.*

We are glad that occasionally an effort is made to originate new and improved varieties of the Potato,—an article that plays such an important part on every man's dinner table should surely not be overlooked.

THE AUGUSTA ROSE.—With respect to the Rose *Augusta*, although not so deep in color as I hoped and wished for, still I will honestly confess that I have been pleased with it. It differs from *Solfatare* in having leaves narrower and more pointed, and its flowers are decidedly of a finer shape than those of that variety, and deeper in color in the center. The flowers of *Solfatare* are much reflexed and flat in hot weather, which is its great fault. Those of *Augusta* are (as it has bloomed here) incurved, and more inclined to be globular in shape. It is in my opinion a step in the right direction: but I hope it will soon be improved, for in your Northern States it might be crossed with the bright yellow, but flaccid-petalled Rose, *Vicomtesse Decazes*, and something much more decided in color be produced. Over propagation, change of climate (in your different States remarkable), and the weather of peculiar seasons, have much effect on the color of Roses, more particularly on those of the Tea-scented and Noisette class. The first two seasons after I introduced the *Cloth of Gold* Rose from Angers, it bloomed in England, to my great vexation, of a dirty white. I could scarcely believe that it was the same Rose I had seen at Angers, and I made a journey to that place expressly to have another look at it. On again seeing it, I felt assured that all would be right in the end; so that I dare say when the *Augusta* Rose is well established it will show more its proper character. THOMAS RIVERS.—*Sawbridgeworth, England.*

The distinctness of the *Augusta* Rose having been questioned by many cultivators in this country, we requested Mr. RIVERS to give us his opinion on the subject, and he has given it as above.

THE CONCORD GRAPE.—In answer to your inquiry, relative to the *Concord* Grape, I would state that it is not in my collection, consequently can not give you the result of my experience in its cultivation. When exhibited, it has passed under my notice for two or three seasons; the past autumn being the only year in which the fruit has been tested by me.

The fruit is handsome, some bunches being quite large, Grapes very black, covered with a rich bloom and measuring from two to three inches in circumference. Where the *Isabella* will not ripen, it promises to be valuable, as it matures its fruit in less time. The *Diana* also does this. Which is to be preferred, must be decided by individual taste. The *Concord* has a decided fox-flavor. The *Diana*, like the *Catawba*, has less. In Massachusetts the *Catawba* rarely will mature its fruit and then only in favored positions. The *Isabella* under proper cultivation and not in a wet cold soil, will always ripen its fruit. When neglected and suffered to be overloaded with fruit, it can not fully do this. The *Diana* will ripen the crop in unfavorable positions and under circumstance when the *Isabella* will not. For Massachusetts, I consider the *Diana* and *Isabella* the best in flavor—the *Concord* the handsomest and the largest Grape and bunch, but inferior in flavor to the two previously named. Where the *Catawba* will ripen, (and this Grape requires fifteen days longer season than the *Isabella*,) many will prefer it to the *Isabella* and it should head the list, as being the most desirable. Under this climate, however, it may be desirable to prolong the Grape seasonby planting the kinds that mature both early and late. It may be assumed that the *Diana* under the best circumstances and best cultivation will mature its fruit in four months and fifteen days; the *Concord* in the same time; the *Isabella* in five months; the *Catawba* in five months and fifteen days.

The all important consideration in the culture of the Grape in the open air, in this country, is severe pruning out of the bunches as soon as formed. Two, three, and four bunches will usually appear on a shoot; cut away *all* but the best one on each shoot. Then you will ripen the fruit rich in flavor, in Massachusetts, every year, as surely as the Apple crop.

Mr. AMOS W. SWETSON, of Braintree, has several hardy Grapes of fine promise, one in particular, quite early. Vines of this, it is presumed, will soon be offered for sale. It closely resembles the *Isabella*. I have seen specimens of this fruit fully colored when the *Isabella* had just began. J. FISK ALLEN.—*December 26th*, 1854, *Salem, Mass.*

It gives us pleasure to make public Mr. ALLEN's opinion of the *Concord*, as he is eminently qualified to judge correctly of the quality and value of Grapes. It will be seen that Mr. ALLEN's estimate very nearly corresponds with ours. We said that it would be two weeks earlier than *Isabella*, Mr. ALLEN says fifteen days; we stated that it was more foxy than *Isabella*, Mr. ALLEN says it has "a decided fox flavor." That the *Diana*, which ripens at same time, is greatly superior to the *Concord* as a table Grape, no one we think will deny, but it is neither so large nor so prolific.

The *New England Farmer* gives the following editorially:

"CRANBERRIES ON HIGH LAND.—Mr. ELIAS NEEDHAM, of West Danvers, has shown us some Cranberries grown on high land, which are of good size, and which, he says, he produces, with good success, having raised some one or two hundred bushels a year, and selling them for three dollars and four dollars a bushel. We have heard his experiments favorably spoken of by his neighbors, and can have no doubt but that he finds an ample reward in the crops for all cost and labor. Here, then, is the example; why can not others copy it, and produce this wholesome and palatable food, so that it shall become common on every table?"

We have seen it stated by the Committee of an Agricultural Society, who had examined the subject carefully, that Cranberries can not be grown *profitably* on dry ground.

NOTES UPON APPLES.—In my selection of Apples for my family's use, I have found the following kinds not only very choice but forming a succession of ripe ones. Commencing with the *Hawley*, the very Prince of Fall Apples, and one combining all the good qualities for dessert as well as for cooking, I have found the *Fameuse* an excellent successor, then the *Scolloped Cornish* or *Red Gilliflower*, which in all respects is a most superior Apple, in eating from November to January; next the *Jonathan*, a most beautiful medium sized, high colored, red fruit, fresh, spicy and juicy; after that the *Green Sweeting*, ripening in January, and continuing good for two months; to be followed by the *Red Canada*, which is a most delicious Apple, very mild sub-acid, and juicy, agreeable in every respect, lasting till my *Northern Spys* begin to ripen, say the first of March, which continues good as long as it is possible to keep one's hands off them. Could I have interspersed with the *Rambo*, a place would have been found in my cellar for a barrel of them. It is an uncertain fruit, the tree never bearing oftener than every other year. It is so choice that it is not wonderful that it takes two seasons for production.

For cooking, the *Twenty-ounce* can not be excelled while it lasts. Then comes the *Rhode Island Greening*, a true and abiding Apple, which most all Americans have known as a choice dessert Apple as well as a most profitable one for pies and sauce. For a sweet Apple in its season (early fall), I much admire the *Bailey Sweeting*; it is a great favorite with us. I wish producers would be sure to raise all the good varieties, for you have to look to different orchards for a selection of twelve varieties of choice fruit. Some are better grown than others, and I would like to have mine from such persons as take the best care of his trees to ensure the best fruit. J. H. WATTS. —*Rochester, N. Y.*

With this note we received from Mr. WATTS some very beautiful specimens of *Jonathan* and *Red* or *Scolloped Gilliflower* — fine varieties of Apples, not extensively grown. The *Jonathan* is a fruit of the very first quality, having the aromatic flavor of the *Spitzenburg*, and greater tenderness, but the tree is a crooked, irregular grower when young.

HORTICULTURAL ITEMS.—*Mildew on Grape Vines.*—The cold vinery of Prof. HUIDEKOPER, of Meadville, is entirely exempt from mildew. His success is attributed to the use of sulphur sprinkled on the ground.

Strawberries.—The *McAvoy's Superior* flourishes here with surprising luxuriance — vines, berries, and all, nearly double the size of *Hovey's*, which does not seem to thrive here as it is said to in other places. *Burr's New Pine*, medium, and of the highest flavor. We have an insect here which destroys the roots of Strawberry vines, leaving only the dusty particles.

Fruits from Seed.—I have devoted about an acre of land to experiments in fruits from seed, and have about sixteen hundred of various fruits, among them over a hundred native Grapes two years old, and promising. Introductory to my experiments, I cut down all worthless fruit trees, and being happily situated at a respectable distance from any vitiating influence from neighboring orchards, think myself prepared for favorable results. I have an accidental variety of Peach, a perfect dwarf, so distinct in foliage and habit, as to be seldom recognized as Peach by visitors. When situated properly, it produces itself from seed. I have budded some of them, as also, *A. pumila plena*, with Peach.

Seedling Potatoes.—This season I have assorted from a lot of seedling Potatoes of various ages, about one hundred, as being worthy of further trial. They are all the produce of new varieties raised here, and are now in the fourth generation in direct line. From some of my first seedlings, now ten to twelve years old, I select one which I call *White Imperial*. If any of the Rochester ten-dollars-a-bushel Potatoes exceed these in quality, the purchaser's money has not been wasted on "humbugs."

Fruit Garden.—I have near a hundred varieties of Pear, mostly dwarf, one, two and three years planted, and many of them are literally crowded with fruit-buds. To this mute, but edifying assemblage from the "Nations," I intend to add by scores, and hope, if my life is spared, to be able to furnish "rough" but truthful and worthy notes for the friends of horticulture. O. T. H.—*Randolph, Penn.*

To Elsie.—That was a most ungenerous thrust of the Editor of the *Horticulturist*, which he makes about the length of your last letter. Ladies' pens or tongues should not be "easily tired" in any good work. While your correspondence the past year has furnished the spice to season his paper, and to make its visits doubly welcome, our friend has failed to appreciate its value; but we would have him understand that it is not so with his readers; and the fear that he may drive you away from his pages, has caused me to address you, and invite a continuance, if not of your correspondence with others, at least of some favors on rural life and pleasures which your ready pen so happily describes. And now, when on that visit to Atticus, may we not hope that some other homes at the east may be gladdened with your cheerful presence, and enjoy the of exercising toward you, true western hospitality. I know that wife would delight in the privilege acquaintance and the little ones' eyes would shine brighter, even from a brief interview. May we not then have the happiness of welcoming you to our home. Cream Hill.

We beg to say, in our own behalf, that we have *not* failed to appreciate the value of our excellent Elsies' contributions. Our remark (perhaps ungallant indeed) was intended to hint that enough had been said on one topic. We trust we are not done with Elsie, but it is possible that just at this time some extra household duties have laid the pen on the shelf for the present. How is it Elsie? Speak for yourself.

Notices of Books, Pamphlets, &c.

An Address delivered before the Brooklyn Horticultural Society by the President, J. W. Degraw, Esq., December 7th, 1854; also, the reports of the Treasurer and Executive Committee.

The Brooklyn people have made an excellent beginning; the society was organized but one year ago, and now the list of members exceeds 450, and that, too, while the price of membership is three dollars yearly in advance. The exhibitions of the season were good—some of them excellent—considering the ill effects of a very dry summer on all garden products; and on the whole, we should judge from the receipts, were well attended by the citizens. It is no longer doubtful whether Brooklyn can or will sustain a Horticultural Society. She has given proof that she both *can and will*. President Degraw has proved himself to be a most faithful and efficient officer, and we are glad to see that he has consented to a re-election. We have read his address with much pleasure.

Proceedings of the Third Session of the American Pomological Society, and fifth meeting of this national association, held in the city of Boston, on the 13th, 14th and 15th of September, 1854.

These proceedings, from which we have already given some extracts, form a thick pamphlet of 258 pages, printed on fine paper, and every way in excellent style. Every nurseryman and fruit-grower, and every man who desires to be well informed in respect to the progress of pomology in this country, should have it. It has already been sent to all members who have paid their biennial subscription of *two dollars;* those who have not paid, and who desire to do so and receive the work, can remit their money and address to the President, Hon. Marshall P. Wilder, of Boston, or to the Treasurer, Thomas P. James, Esq., of Philadelphia.

Transactions of the Ohio State Pomological Society, Sixth Session, held at Columbus, December 5th and 6th, 1854.

We find these proceedings eminently practical and useful. We give an extract this month—"List of fruits recommended for Ohio"—and shall return to them in our next.

PATENT OFFICE REPORT—Part 2, 1853.

We are indebted to the Hon. H. L. STEVENS, M. C. from Michigan, for a copy of this report, a volume containing much valuable information concerning agricultural affairs, gleaned from all parts of the country. We regret to see it disgraced by some paltry drawings of fruit, corn, &c., printed in colors. Such things should either be let alone, or executed in a manner creditable to the state of art in this country, and to the taste and intelligence of the people for whom the book is printed, and who pay for it. We regard the expense of printing over 100,000 of these plates as much worse than thrown away. Will the commissioner look to this?

TRANSACTIONS OF THE ESSEX, MASS., AGRICULTURAL SOCIETY, for 1854.

In addition to the very interesting reports of committees, we find in this document an address by RICHARD S. RAY, Esq., and the premium essay by Dr. E. G. KELLEY, of Evergreens, Newburyport, Mass. We have read Dr. KELLEY's essay with great pleasure. The subject is one of equal importance to the farmer and gardener—*Deep Tillage*. We shall be able to notice it more fully in our next.

TWENTY-FOURTH ANNUAL REPORT OF THE NEW HAVEN HORTICULTURAL SOCIETY for the year 1854.

We are happy to see, by the report, that this society is in a prosperous condition. The tax-paying members for 1854 numbered over 300. Weekly meetings have been held during the season; and a balance remains in the treasury after defraying all expenses.

Answers to Correspondents.

A CORRESPONDENT desires us to give a plan of a greenhouse or conservatory for professional men or the better class of farmers. We shall do so as soon as possible.

(W. C. L., Lowell, N. Y.) THE ANGERS QUINCE.—We cannot answer respecting the value of this variety to be grown for market, not having fruited it sufficiently. We doubt its being equal to the *Orange* or *Apple* variety in general cultivation now; and rather than run the risk of planting the *Angers*, would graft the *Orange* on it.

(J. W. G., Hillsborough, Ohio.) INSECTS.—The insect inclosed was crushed, and not in a fit state to be identified. We think it cannot be the "Apple Borer" known as such. Send us another specimen in a small box, so that it will not be crushed. You will find descriptions of the Apple and Peach borers in all the fruit books.

(J. P., Neersville, Virginia.) ORCHARD GROUND.—Before replanting your old orchard ground, we would advise you to manure it well with stable manure, and seed it with clover and plow this down green. This will put it in good condition in as short a time as it is possible for it to be done well. In breaking it up you should use the subsoil plow.

(J. G. R. R., Lovettsville, Virginia.) INSECTS ON THE ROOTS OF APPLE TREES.—The insect you describe is the *Wooly Aphis*—a troublesome pest either on roots or branches, but worse when on the roots. We cannot suggest any effectual remedy. The course we would advise would be to get your nursery trees out of the soil they are in as soon as possible, and plant in new ground. We have rarely seen roots affected in good fertile soil and under good cultivation, and if affected at all, not so seriously as to injure the trees.

(D. E. G., Haviland Hollow, N. Y.) TRANSPLANTING EVERGREENS.—We prefer the spring for all, when the ground is dry and warm, and the season of growth near at hand. The "Common Wood Laurel," by which we suppose you mean the *Kalmia*, can be transplanted very well. You will see some hints respecting it in our last volume.

Scions or trees of the American Weeping Willow can be had in most of the nurseries now.

(W. B., Salem, Wis.) ASPARAGUS.—We will have an article soon, that will give you the desired information; meantime we will say, that to have it "*early* without forcing, hardy and productive," you must have a *deep, rich, dry and warm soil.* It should be trenched eighteen inches or two feet deep, and highly manured; cold manure is the best. The plants should be a foot apart each way, and the beds should be about four feet wide, with a path between. The plants should be one or two years old from the seed, and when planted should be covered about four inches deep with fine surface soil. Details will be given hereafter.

(P., Hamilton county, Ohio.) EVERGREENS.—As we have answered another correspondent, we should prefer spring for transplanting, when the ground is dry and warm and growth about to commence. Where they can be moved with a ball of earth, it may be done at any convenient time, except the very hottest of mid-summer weather. For a belt of evergreens to shelter a fruit garden, we would advise Norway Spruce, White Pine, Austrian Pine, and Hemlock, one half to be Norway Spruce, the others in equal numbers, or as near that as might be convenient. Plant in double and tripple rows, placing the trees in one row opposite spaces in the other, and mixing the sorts so as to produce pleasing contrasts between their various shades. You might plant ten or twelve feet apart, and thin out afterwards, as growth would render it necessary. European Larch, though *deciduous*, might be mixed in to advantage.

(J. G., Clark county, Ohio.) REMEDY FOR THE PEACH WORM.—Lay around each tree, early in spring, say April, half a peck to a peck of air-slaked lime, or wood-ashes. Spread them over the ground in the fall and it will make a good dressing. Renew again in the spring. Besides this, examine the trees several times during the season, and if the grub has made its way into any of the trees, cut it out. Covering the tree with muslin at the time the fly lays her eggs, might be effectual, as you say. The point attacked is generally at the surface of the ground.

SIX MOST VALUABLE HARDY PEACHES.—*Early York, Crawford Early, Crawford Late, Cooledge Favorite, Old Mixon Free, Red Cheek Melocoton,* or *Morris White.*

SIX MOST VALUABLE ORCHARD WINTER APPLES.—*Rambo, Yellow Bellflower, Vandervere,* (*Newtown Spitzenburg,* in Ohio,) *Winesap, Newtown Pippin, Talman's Sweeting.* These all succeed well in your locality—should not recommend such a list for New York or Eastern States.

FIVE MOST PROFITABLE CHERRIES—*May Duke, Black Tartarian, Napoleon Bigarreau, Monstreuse de Mezel, Tradescant's Black Heart.*

FIVE MOST PROFITABLE WINTER PEARS.—*Vicar of Winkfield, Lawrence, Easter Beurre, Glout Morceau,* and *Prince's St. Germain.*

FOR COOKING.—*Pound* or *Cattillac.* The first is the best keeper. *Chaptal* and *Easter Bergamot* are both very profitable cooking Pears.

Your correspondent HORTICOLA touched on an interesting and important subject, in the December number, when he spoke of hardy European shrubs. Cannot some one give us the light we so much desire on this point? The common Privet tries hard to be an evergreen here, but has to give it up about mid-winter. The Mahonia, Box, Savin, and a few other low plants, help the matter a little, but our poverty in this line is very apparent. Have not the Chinese a method of dwarfing trees, as well as the feet of their fair ones? If there is such a method, (consisting chiefly, I believe, in a series of root-prunning,) can we not apply it to evergreen trees, and thus provide ourselves with a class of dwarfs as substitutes for shrubs? (1.) The Hemlock, English Yew, Red Cedar, Swedish Juniper, and some of the Arbor Vitæs are beautiful when young; and if art can make them permanently small, would they not in some measure compensate for the absence of the Hollies, Laurels, and Rhododendrons, the charm of the English country landscape?

I have a cast-iron article standing on my lawn, which was bought for a vase. It is painted white, in imitation of marble. On visiting a cemetery in a neighboring city, shortly after this purchase, I observed several of the articles, precisely like mine, standing at the head of graves, and I was told that they were called urns. Will you tell me the difference between a vase and an urn? (2.) Is a vase an urn when it stands in a burial-ground, and an urn a vase

when it decorates a lawn? And ought one of these articles, when used as a garden ornament, to stand empty, or to be filled with earth and planted with small trailing vines or flowers? Urns were used anciently, all know, as deposits for the ashes of the dead; and therefore, when employed in cemeteries at the present day, should not contain flowers. But as we wish to suggest very different ideas by our garden decorations, should we not enliven our vases or urns, (whichever they be,) with flowers?

I have a Norway Spruce which was decapitated a year ago, but which I now wish to grow erect. Can its leading shoot be restored? And if so, how can it be done? (3.) A. D. G.

(1.) The Hemlocks, Red Cedar, Arbor Vitæs, all the Junipers, and even the Norway Spruce, may be kept quite low by shearing or pruning the tops only; but none of these compensate for the want of *broad-leaved* evergreens, such as Hollies, Rhododendrons, Kalmias, &c. An article from Mr. MUNN, on this subject, will be given in our next number.

(2.) An urn is quite a different thing from a vase. The former has a covered top, and was formerly used as a receptacle for the ashes of the dead after the bodies were burnt. It is not in actual use at the present day, except as a mere ornament in cemeteries. Large, classic vases, such as the Warwick, Borghese and Florence, are in themselves beautiful works of art, and as such are placed in gardens or on lawns without plants; but all small vases, cast-iron, rustic, &c., should be filled with plants; they are evidently intended for that purpose. A small, empty cast-iron vase on a lawn is a paltry piece of affectation.

(3.) Take the most vigorous shoot in the best position for a leader, and fasten to a stake, attached below to the stem of the tree.

WILL you have the goodness to enlighten me a little on the management of the *Manetti* Rose. Some three years ago I purchased a few dozen plants, with a view to increase them by cuttings, which I understood would grow almost as readily as a Willow. The next autumn I headed all the plants down, making as many cuttings as possible, allowing three or four buds to each. These were planted carefully, and to secure them against the effects of the winter, about two inches of chopped thatch was spread over the surface. The cuttings appeared bright in the spring, but not one of them rooted! Since this experiment I have grown them by layers, but when it is desirable to propagate them rapidly, cuttings are preferable. Having a few strong plants, I should like to ascertain if I can use their tops successfully in the open ground, for cuttings. Please inform me at what time they should be planted, and in what sort of soil, &c. Another difficulty I have experienced is, that, although I have had some little experience in budding, and find no difficulty when I use *Sweet Briar*, or *Boursault* stocks, I do not succeed at all when the *Manetti* is used.

Can you also tell me how I can succeed in getting seed of Linden, *Cornus mascula*, and *Halesia tetraptera*, to grow? I have sowed them in the autumn, but could never succeed in getting one of either of them to grow. The *Cornus mascula* I have managed according to the direction given for managing Haws, and at other times planted them in autumn. The *Halesia* I have sowed entire as it was taken from the tree, and sometimes cut in so as to expose the kernel; but they wouldn't grow. A READER.

The *Manetti* Rose grows from cuttings as freely as Willows. We cannot understand the cause of your failure, because we succeed in the same way. We plant in spring generally, just as we would Currant cuttings, and bud the same season. The buds take rather better late in the season, say 1st September when the strongest growth is over.

About seeds — the Linden rarely grows well; the others should succeed by keeping them in a rot-heap one season. We treat them in this way successfully.

ALLOW me to prepare a little matter for your consideration, or that of those of your subscribers learned in pomological nomenclature. *Unde derivatus* PASSE *Colmar?* That the above is almost universal orthography I have no doubt, but it has always sounded to me unmitigated nonsense. I have a copy of *The Gardener's Remembrances*, published at Glasgow in 1819, by JAMES MACPHAIL, in which he lists a Pear as *Colmar*. About 1834 I added three or four varieties to this list upon the recommendation of Mr. JOHN PAGE, Gardener to Sir JOHN DELVES BROUGHTON, Bart., of Doddington Park, Cheshire, England, among which is PERCY *Colmar*. This list I afterwards (in 1841) referred to in conversation with a Mr. JOUBERT, a somewhat locally noted orchardist and vine-grower at Verton, in Brittany, and I perfectly remember his recognizing the cognomen as there written. The book alluded to has been out of my possession for many years, until within a few weeks past, when I received it with other portions of a family library from France, and the entries above alluded to happening to catch my eye, I deemed the matter, though trivial, at any rate worth a moment's consideration. If any inquiry on the subject is merited, there is no fitter arena for the disquisition than the increasingly valuable pages of the *Horticulturist*. ZENAS.—*West Brighton, Ill.*

The *Passe Colmar* is one of those Pears to which a score of synonyms have been given. The word *Passe* is of various significations in French; in this case it appears to indicate a superiority to the old *Colmar*, once a popular variety all over Europe. We take this to be the true nomenclature. We have *Passe tardive*, a very late Pear, in the same way. Surpass in English would have the same meaning.

In this climate, where winter may be said to "linger in the lap of spring" till almost summer, there is hardly time, without extra help, which every one is not able to have, or which can not always be got of the kind wanted to perform all the operations necessary to a complete garden of flowers, fruit, and vegetables. I would like to know, if many things, such as sowing seeds in pots, planting of summer flowers, bulbs and tubers — Gladiolus, Dahlias, and the like, and many other things of a kindred nature, may not be done at any time after winter sets in, and without much risk, provided the pots are kept in a cool dark cellar until a hot-bed or the open ground is ready to receive them. (1.)

As I desire to set out some Roses in spring, I would like also to know the names of a dozen or so of most hardy ever-blooming kinds, which will stand our winter with least protection, and give me the most constant bloom. I do not care about the size or kind of bush, or even if it dies to the ground in winter, provided it will come up again in spring and give me buds and blossoms for boquets in summer. (2.)

What kinds of tender Roses, such as must be taken up in fall and kept in cellar in winter from frost, for the front of a border, or elsewhere, will give me the most constant and various bloom with the ordinary cultivation a general flower border receives in a tolerably well kept garden. (3.)

I take the liberty of asking these questions, believing your replies will give others information as well as myself. A SUBSCRIBER.—*Utica, N. Y.*

(1.) We cannot venture to advise much to be done in this way, because many buds and bulbs are very easily injured by moisture when placed in the earth and kept dormant. As a general thing, it is better not to pot or plant until heat sufficient for vegetation can be given. Considerable may be done in the way of forwarding annuals, bulbs, &c., in frames during the early spring, so as to bring them into bloom in the open ground at an early period of the season. Dahlias should never be planted before the first of June, or thereabouts.

(2.) A dozen of the best hardy perpetual Roses, free growers and good bloomers — *Baron Prevost, Baron Hallez, Duchesse de Nemours, Geant des Batailles, La Reine, Marquise Boccella, Madame Lamoriciere, Madame Laffay, Pius* IX, *Caroline de Sansal, Victoria,* and *William Jesse.*

(3.) BOURBONS—such as *Souvenir Malmaison, Leveson Gower, Hermosa, Mrs. Bosanquet,* and *Jupiter.*

NOISETTES—such as *Cloth of Gold, Amie Vibert, Solfatare, Caroline Marinesse,* and *Fellemberg.*

TEAS—*Bougere, Lady Warrender, La Pactole, Devoniensis, Souvenir d'un ami, &c.*

BENGALS—*White Daily, Cels, Sanguinea, Madame Breon.*

HERE have I been reading your Magazine from the first number, and have never dropped a word of acknowledgement. Republics, they say, are ungrateful. Can it be that the spirit of the mass so infects the minute particles? But how can I express my gratitude? "Certainly not," I fancy I hear you exclaim, "by a long-winded exordium. If you have any thing to say, out with it." Consider yourself, then, most heartily thanked for the Magazine. No more welcome periodical makes its advent to my library.

And now as I know you love to answer questions, I am going to ask you a few. Do you know I find it exceedingly difficult to ripen perfectly, so that they shall have any flavor, both the autumn and winter Pears? There is, for instance, the *Beurre Diel.* Some specimens, it is true, ripen very well, with a fine rich taste; but others again are not worth the eating. Moreover, the books say, "In eating from September to December, if ripened in the house." Now, wrap them up in as soft paper, and put them in as cold a place as I please (barring an ice house), they won't keep with me longer than through October. There are the *Beurre d'Aremberg* and *Vicar of Winkfield,*—why, as ripened by me, a pig of good taste would turn up his nose at them. In fact, if my pig would'nt, I should doubt the purity of his breed. Now, what secret do you genuemen, the WILDERS and other eminent Pomologists, who boast you can make a *Vicar of Winkfield* eatable — I say, what secret (valuable as that the Hon. Mr. MATHEWS', who has been engineering at the curculio, says he possesses, and, *proh pudor!* wont, without a consideration, communicate to the public), do you possess? Don't refer me to what has been written; if you do, you drive me to despair. Is it so that a bountiful Providence has furnished winter Pears, and then, as the condition of ripening them and the price at which they may be eaten, required us to build houses stuffed with charcoal?—or is it that my climate and soil are bad? or do I pick them too soon or too late? (I let them hang on the trees till hard frosts set in.)—or am I unreasonable, and demand a higher flavor than can be obtained? for, upon my word, I never saw one that was fit to be eaten. Speak! "Let me not burst in ignorance."

Again, will you not do me and many another ignoramus, the good service to name the kinds of Pears which should be picked before maturity? The *Seckel* and *Autumn Melting* should, I believe, be left to mature; the *Bartlett,* not. But how is it with the *Louise Bonne de Jersey, Beurre Goubault, Henry IV, Dix, Osband's Summer, Oswego Beurre, Beurre Bosc, Beurre d'Anjou, Urbaniste, Heathcot,* and as many others as you please!

So much for my questions. And now, in pre-payment, or rather a small installment toward the payment for the answers I expect, and in order to throw — not my widow's mite, for I am no widow — but my equally humble contribution into your treasury, I give you a couple of items from my experience and reading.

I find that Garlic planted round the butt of a tree is an effectual protection against the borer. I have tried it some years, and know it answers the purpose. Once planted, there it is, and continues, and is no trouble. I do not recollect to have seen this antidote mentioned in the *Horticulturist,* or elsewhere. You may be surprised at my liberality, but I ask no reward for the discovery.

A French publication I was reading the other day, contains something interesting. A horticulturist in the neighborhood of Versailles, a diligent student of vegetable physiology, conceived the idea that the diminutiveness of certain plants, for instance the Violet, was attributable to the pressure of the atmosphere, a weight too great for thin, feeble organs. The idea having once secured a lodgment in his brain, he sought means to confirm it. This is the expedient he resorted to: Having obtained a little balloon, he attached to it like a parachute, a pot in which were planted a number of Violets, (*Violette de Parme,*) and anchored it to the ground by a silken string at the height of some 3,800 feet. At the end of two months Violets were obtained of the size of Bengal Roses. It would be a pleasure to have some of the specimens at our next Horticultural Exhibition. Would not some amiable and patriotic Frenchman, "jealous of his country's fame," be willing to furnish them? IGNORAMUS.

We pity our Connecticut friend who can not ripen such Pears as *Beurré Diel* and *Beurre d'Aremberg*, that need only be picked from the trees when frost comes, and placed on shelves in a good dry cellar, where they will soon ripen and be delicious. These are two Pears that can scarcely be mismanaged in ripening. The *Vicar* needs to be ripened in a temperature of 60° or 70°. Winter Pears are worth ripening just as Potatoes are worth boiling or baking. We know of no variety of Pear that is improved by ripening fully on the tree, not excepting *Seckel* or *Autumn Melting*. All the Pears you name are *much* better ripened in the house,—the temperature of a living-room is good for fall varieties.

A correspondent at Waukesha, Wisconsin, writes to us as follows:

"The *Isabella* and *Catawba* Grape vines are not perfectly hardy in this portion of the West. They are liable to be killed to the ground, unless protected through the winter. I usually care for them by laying down in the fall and covering with a few inches of earth. I sometimes question the excellence of this plan,—the vines becoming so thoroughly impregnated with moisture, are they not thereby made tender, and more liable to the action of late frost after uncovering?

Will you, when convenient, give some advice through the *Horticulturist* as to the best mode of proceeding in planting a vineyard of several hundred vines, with express reference to the necessity of protection? also simple and explicit directions as to the training and pruning such a vineyard in a climate thus unfavorable.

The *Clinton* is hardy and productive, but its flavor is not fine enough for a table Grape, in my estimation. Among the many new seedlings yearly produced may we not hope for a variety as hardy as the *Clinton* and as good as the *Isabella*?"

WHICH ARE THE BEST ROSES?—In some of the former volumes of your journal, your readers were treated with the experience of many extensive florists, by naming the best twenty-five Roses, the best twelve, the best six, &c., for out-door culture. We would like to hear from them again, to know if their opinions remain unchanged. Such information is highly valuable to persons unacquainted with the blooming properties of the different kinds. I am about to stock a new yard, the coming spring, with shrubbery, mostly Roses, and desire to make such purchase as will not disappoint me. Good bloomers, fine forms, distinct colors, dwarf habit, or at least such as can easily be protected if needful, and good foliage, are the characteristics for them to possess. The selection to be made from perpetuals, or fall-blooming Roses. The Roses figured in the last two numbers will undoubtedly take their place among the favorite few. A FARMER'S WIFE.

VERBENAS.—In the November number, page 514, is an article on wintering Verbenas in small pots. I can not see what is meant by wintering them in small pots, when it is distinctly said they are placed in boxes early in August, in which they remain all winter. I am so much troubled with the plant louse attacking the roots of my Verbenas, German Asters, Dahlias, and some other plants, that I am nearly discouraged. I can find no remedy laid down in any work that I have consulted for the louse that attacks the roots. Will some one give the desired information and oblige? SUBSCRIBER.—*Mechanicsville, N. Y.*

Horticultural Societies, &c.

GENESEE VALLEY HORTICULTURAL SOCIETY.—The annual meeting of the Genesee Valley Horticultural Society will be held in the city of Rochester, on Saturday, the 10th day of February, at 10 o'clock, A. M. There will be a show of winter fruit.

Engraved by H.W. Smith from a Daguerreotype by Whipple

Thos. Sherlock P. Wilder

1 Bouquet parfaite. 2 La Vogue. 3 Solfatare. 4 Valedà.

5 Bernettianum. 6 Helen. 7 La Rouge. 8 Grand Sultan.

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